Draft Environmental Impact Statement

Spaulding Turnpike Improvements

NHS-027-1(37), 11238

Newington to Dover

New Hampshire

July 2006

Volume 3

Federal Highway Administration

New Hampshire Department of Transportation

Spaulding Turnpike Improvements NHS-027-1(37), 11238

Newington to Dover, New Hampshire

Prepared for **New Hampshire Department of Transportation and Federal Highway Administration**

Prepared by: ***VHB*/Vanasse Hangen Brustlin, Inc.**
Bedford, New Hampshire

July 2006

Appendices

- Appendix A: Agency/Municipal Correspondence
- Appendix B: Public Meeting Notes
  - B1: Advisory Task Force Meetings
  - B2: Scoping, Public Informational and Officials Meetings
- Appendix C: Farmland Conversion Form
- Appendix D: NEWILD Data
- Appendix E: Rare Species Coordination
- Appendix F: Surface Water Biomonitoring Data
- Appendix G: Historic Resource Documentation
- Appendix H: Air Quality Technical Information
- Appendix I: Feasibility Study Alternatives, February 2000
- Appendix J: Environmental Justice Evaluation
- Appendix K: Wetland Impact Database Summary
- Appendix L: Noise Barrier Evaluation

Appendix A – Agency/Municipal Correspondence

June 4, 2003	United States Coast Guard
June 6, 2003	Department of the Army, New England District, Corps of Engineers
June 9, 2003	Office of State Planning
July 8, 2003	Office of State Planning and Energy Programs, NH Coastal Program
July 17, 2003	United States Department of Commerce, National Oceanic and Atmospheric Administration
July 23, 2003	Office of State Planning and Energy Programs, NH Coastal Program
July 30, 2003	Department of the Army, New England District, Corps of Engineers
August 20, 2003	United State Coast Guard
October 20, 2003	State of New Hampshire, Department of Resources and Economic Development, Division of Parks and Recreation
March 26, 2004	Office of State Planning and Energy Programs, NH Coastal Program
April 2, 2004	NH Fish and Game Department
April 5, 2004	United States Environmental Protection Agency
April 14, 2004	Coastal Conservation Association of New Hampshire
April 14, 2004	Strafford Regional Planning Commission
February 10, 2005	City of Dover, New Hampshire
February 11, 2005	United States Environmental Protection Agency
February 18, 2005	Strafford Regional Planning Commission
February 25, 2005	Department of the Army, New England District, Corps of Engineers
October 18, 2005	Town of Newington, New Hampshire
November 9, 2005	City of Dover, New Hampshire

December 21, 2005	Town of Newington, New Hampshire
December 27, 2005	City of Dover, New Hampshire
January 17, 2006	City of Dover, New Hampshire

U.S. Department of Homeland Security

United States Coast Guard

Commander
First Coast Guard District

One South Street
Battery Park Building
New York, NY 10004-5073
Staff Symbol: obr
Phone: (212) 668-7165
Fax: (212) 668-7967

16591/0.1H/
LITTLE BAY/NH
June 4, 2003

Ms. Kathleen O. Laffey
Division Administrator
Federal Highway Administration
279 Pleasant Street, Suite 204
Concord, NH 03301-7502

Dear Ms. Laffey:

This responds to your letter of 9 May 2003 concerning preparation of an Environmental Impact Statement for proposed widening of a 3.5-mile section of the Spaulding Turnpike (NH Route 16). This project is identified as Newington-Dover, NHS-027-1(37), 11238.

As the project will cross Little Bay, the Coast Guard will agree to be a cooperating agency under terms related in your letter. We expect that all navigational concerns will be addressed under an appropriate section of the EIS. Regarding the scoping meeting on 25 June 2003, we anticipate sending representation.

Additionally, we feel that any proposal considered should include provision for removal of the former General Sullivan (Route 4) Bridge which is abandoned in place.

Ernie Feemster of our office has been designated project manager and may be contacted at: (212) 668-7994.

Sincerely,

Gary Kassof
Chief Bridge Branch
First Coast Guard District
By direction of the District Commander

Copy: J. McDonald

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

June 6, 2003

REPLY TO:
ATTENTION OF:

CENAE-R-01-200301198

Ms. Kathleen O. Laffey
Division Administrator FHWA
279 Pleasant Street, Suite 204
Concord MA 03301-0417

Subject; Newington Dover EIS Corps Will be a Cooperating Agency

Dear Ms. Laffey:

This is to provide you with written confirmation of our agreement to be a cooperating agency on the Newington-Dover EIS.

As set forth by the CEQ regulations (40 CFR1501.5 and 15601.6(a) and 1508.16), and Corps of Engineers Regulations 33CFR Part 325, we will coordinate with the Federal Highway Administration and the NH DOT as a cooperating agency.

Mr. Richard Roach, a Senior Project Manager in our Regulatory Division, will represent the Corps and actively participate in your coordination meetings and will plan to attend your scoping meeting on Wednesday June 25, 2003.

If you have any questions, or I can be of further assistance please do not hesitate to contact me directly at 978-318-8222, or Mr. Roach, of our regulatory staff, at 978-318-8222.

Brian A. Green, P.E.
Lieutenant Colonel, Corps of Engineers
Deputy District Engineer

Loc: Reg Br, BrC, BrCmaster, NH DOT, Newington Dover

OFFICE OF STATE PLANNING
STATE OF NEW HAMPSHIRE
2½ BEACON STREET - CONCORD 03301-4497
TELEPHONE: 603-271-2155
FAX: 603-271-1728

June 9, 2003

Ms. Kathleen O. Laffey
Division Administrator
U.S. Department of Transportation
Federal Highway Administration
279 Pleasant Street, Suite 204
Concord, NH 03301-7502

Re: Newington-Dover, NHS-027-1(37), 11238, Environmental Impact Statement

Dear Ms. Laffey:

The New Hampshire Coastal Program is the appropriate section of the Office of State Planning (OSP) to be part of interagency discussions/meetings on the Spaulding Turnpike proposal. Because of the federal involvement, the Coastal Zone Management Act of 1972 requires that such projects be "consistent" with the NH Coastal Program, itself a federally approved program. My principal planner for federal consistency determinations is Brian Mazerski whom I designate as OSP's participant throughout the project.

Brian will attend the scoping meeting on June 25 in Newington. Please contact him at (603) 271-2155 (fax 271-1728) or e-mail him at bmazerski@osp.state.nh.us with any updates.

Sincerely,

James F. McLaughlin
Assistant Director

Cc: Mr. Chris Waszczuk, NH DOT

8 July 2003

Brian K. Mazerski Office of State Planning & Energy Programs
New Hampshire Coastal Program

Newington-Dover EIS Turnpike/Bridges

Christopher Waszczuk
Department of Transportation
Bureau of Highway Design

Messenger

The NH Coastal Program (NHCP) will continue to participate in all public meetings such as the scoping meeting held on June 25 in Newington. At that meeting, in the absence of a NH F&G representative, I mentioned that DOT must consider the planned changes to the Hilton Park boat ramp when siting bridge/highway structures.

Your office is familiar with CZMA "Consistency" requirements which will have to be coordinated as the final plans near construction. DOT will have to make a "consistency determination" with the 16 NHCP policies because of the federal permits/monies involved in the project. Close coordination with such agencies as NHF&G (habitat), DES (wetlands permit and water quality), Cultural Affairs (historical issues), among others – as well as public involvement - is the means to a project that is consistent with the NHCP. Your network of contacts, some yet to be identified, generally overlaps the network of agencies with which we review a consistency determination. I expect that such a corporate body can reach consensus to meet your project needs.

Regarding specific issues, I offer the following inputs at this time:

- The safety concerns about the General Sullivan Bridge raised by the Coast Guard will have to be weighed against the "historic" nature of the structure. "Public Access" to the coast (on land and water) is a key tenet of our program. Additionally, a scenic bikeway should be some part of the crossing for access. Whether or not a "local" vehicular access (not on the main highway) is also incorporated is more a transportation issue but one that impacts "access."
- The Army Corps of Engineers' suggestion for a historical study of fill and dredge patterns project area of the bay estuary is a good one. Such a study will yield important information regarding placement of future structures (bridge piers) and the waterway conditions in the estuary. The presentations made it clear that wildlife habitat concerns will be fully examined in the EIS process.

I commend your team for the presentation made during the scoping meeting as well has for handling the range of issues raised by an interested public audience. Call me at 431-9366 if you have any questions.

My (**new**) address is: 152 Court St, Suite 1; Portsmouth, NH 03801; e-mail (temporary) mazcoast@yahoo.com until I get fully connected into the state system. (The Concord part of the NH Coastal Program received direction to relocate to our Portsmouth office in June, after the letter was sent identifying me as the point of contact for OSP&EP.)

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

JUL 17 2003

ACTION
DA
ADA
BR
CS
ITS/CE
AE
EPM
SPM
PL
TFS
P A
SEC

Kathleen O. Laffey
Division Administrator
U. S. Department of Transportation
Federal Highway Administration
279 Pleasant Street, Suite 204
Concord, New Hampshire 03301-7502

Re: Newington-Dover, NHS-027-1(37), 11238, Environmental Impact Statement

Dear Ms. Laffey:

This responds to your letter of May 9, 2003 requesting the National Marine Fisheries Service (NOAA Fisheries) to participate as a cooperating agency for the proposed widening of the Spaulding Turnpike (NH Route 16) in the area of the Town of Newington and the City of Dover, New Hampshire. According to your letter, the proposed project is intended to provide additional highway capacity in the vicinity of the Little Bay Bridges to address congestion problems and improve roadway safety. The Federal Highway Administration (FHWA) and the New Hampshire Department of Transportation (NHDOT) will be preparing an Environmental Impact Statement (EIS) for the proposed project. NOAA Fisheries agrees to participate as a cooperating agency to help advance effective interagency coordination in developing an EIS and other necessary National Environmental Policy Act documents.

Our role and degree of involvement as a cooperator will be constrained by existing staff and fiscal resource capabilities. Our contributions generally will be limited to scoping, identification of issues and topics that need consideration and evaluation in the EIS, review of documents, and routine attendance at meetings. We are not in a position to undertake data collection, conduct EIS analyses, or prepare sections of the draft or final EIS, as staff and resources are fully tasked in other obligatory NOAA Fisheries programs.

According to the your letter, the NHDOT and FHWA conducted a scoping meeting on June 25, 2003. Unfortunately, previous staff commitments prevented NOAA Fisheries from attending this meeting. However, we look forward to attending future meetings and would appreciate notification of those events. After reviewing the brief description of the proposed project in your letter, we offer the following preliminary comments.

The Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act require federal agencies to consult with one another on projects such as this. Insofar as a project involves essential fish habitat (EFH), this process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which

mandates the preparation of EFH Assessments and generally outlines each agency's obligations in the relevant consultation procedure. An EFH Assessment should be included as part of the necessary National Environmental Policy Act documents or as a separate document. It should include, at a minimum, the following information: 1) a description of the proposed action; 2) an analysis of reasonably foreseeable impacts including secondary and cumulative effects on EFH, federally-managed species, and major prey species; 3) the action agency's views regarding effects on EFH; and 4) proposed mitigation, as appropriate.

Our initial assessment indicates that the proposed work site borders and includes areas identified as EFH for life history stages of several species managed by the New England Fishery Management Council and NOAA Fisheries. These include the eggs and larvae of Atlantic cod and haddock; larvae, juvenile and adult Atlantic herring; juvenile and adult Atlantic salmon, red hake, whiting and Atlantic sea scallops; eggs, larvae, and juvenile pollock; eggs, juvenile, and adult white hake; and all life history stages of windowpane, yellowtail, and winter flounder. This area is also known to support a number of NOAA Fisheries trust resources, such as soft-shelled clams, blue mussels, American lobster, tomcod, rainbow smelt, American shad, blueback herring; Atlantic silverside, striped bass, and eelgrass.

Following our review of the EFH Assessment for the proposed activity, NOAA Fisheries will be able to more thoroughly assess anticipated adverse impacts on EFH and associated marine resources. At that time, we may provide EFH Conservation Recommendations.

We appreciate the opportunity to participate in early coordination on this project with FHWA and other agencies. Related correspondence should be addressed to the attention of Michael Johnson at the letterhead address above, or by phone at (978) 281-9130.

Sincerely,

for Patricia A. Kurkul
Regional Administrator

cc: ACOE: Richard Roach
EPA: Mark Kern
USFWS: William Neidermeyer
NHDES (Portsmouth): Dori Wiggin
NHF&G (Durham): John Nelson

File: FWHA_Newington.doc

Office of State Planning and Energy Programs
NH Coastal Program
152 Court Street, Suite 1
Portsmouth, NH 03801
Phone (603) 431-9366

RECEIVED
JUL 2 4 2003
VHB, Inc.

23 July 2003

Mr. Peter J. Walker, CWS
Director, Environmental Services
Vanasse Hangen Brustlin, Inc.
Kilton Road, Six Bedford Farms, Suite 607
Bedford, NH 03110-6532

Re: Spaulding Turnpike Improvements: Newington-Dover, New Hampshire

Dear Pete Mr. Walker:

I just recently received your 1 July 2003 letter. Since I have been designated the focal point for this DOT project from our agency, I am responding in lieu of Ted Diers. Attached I provide a copy of the memo I sent to DOT on 8 July; I have also sent a copy of the 9 June 2003 appointment letter (though the address has changed). In addition to inputs made in that memo, NH Coastal Program adds that it continues to promote marsh restoration in our coastal zone. The Army's suggestion of a wetlands inventory may yield some possibilities for such restoration. Should DOT funding not allow for such planning/restoration, NOAA grant monies may be available were the affected municipalities interested in applying for it.

Additionally, NH Coastal Program asks that the EIS consider the following:

- Use of Best Management Practices (BMP) in the improved roadway design to address runoff/stormwater impacts, especially in the eastern (commercial) area where water quality of tributaries such as Paul Brook in Newington has declined.
- Examination of shoreland armoring (rip rap, etc) in the project area and its impacts on erosion, particularly around Dover Point and Hilton Park. Research alternatives to maintenance of the shoreline in support of the improved highway design, while optimizing habitat protection and possible restoration.
- Evaluation and protection of eelgrass beds, particularly in the bridge rework zone in the project area. Dr. Fred Short of UNH should be contacted as the local expert in this field.

As the attached memo indicates, our office must be formally consulted for a (coastal) consistency determination when appropriate. As part of the consistency process, I stand ready to assist you in preparing any determination. I will be available for any meeting on the project and ask that you keep me in the loop.

I ask that you send any future correspondence to the above listed address. We have recently moved from the Concord address effective late in June 2003. Our fax number is (603) 431-1438. My e-mail (temporary – until full connection with the NH Government network) is mazcoast@yahoo.com should you wish to contact me in that way. Please call me with any questions.

Sincerely,

Brian K. Mazerski
Federal Consistency Coordinator

cc: Christopher Waszczuk, NH DOT

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

July 30, 2003

REPLY TO:
ATTENTION OF:

CENAE-R-01-200301198

Ms. Kathleen O. Laffey
Division Administrator FHWA
279 Pleasant Street, Suite 204
Concord MA 03301-0417

Subject; NH DOT Newington Dover EIS Basic Project Purpose

Dear Ms. Laffey:

This is in response to your July 16, 2003 letter to Colonel Koning requesting that we provide you with written comments on the project schedule and the purpose and need statement for the Newington-Dover Project.

After reviewing your project purpose and need statements, we have determined that for the purposes of our section 404 permit evaluation, the basic project purpose of the proposed activity is to allow for the safe and efficient flow of present and future traffic along the Spaulding Turnpike from Pease Gosling Road to the Dover toll facility. We will use this basic project purpose in determining compliance with the 404 (b) (1) Guidelines.

As for the project schedule, we are committed to support your project schedule by providing timely written commitments for all those milestones contained in our Highway Methodology. I have attached a copy of this booklet for your review.

In our view, the schedule for producing an EIS could be compressed. The EIS for the Manchester Airport expansion took approximately eighteen months and the EIS for Route 101 was done in two years.

If you have any questions, or I can be of further assistance please do not hesitate to contact me directly, or Mr. Roach, our Regulatory Senior Project Manager assigned to this project, at 978-318-8222.

Sincerely,

Christine Godfrey
Chief, Regulatory Division

U.S. Department of Homeland Security
United States Coast Guard

Commander
First Coast Guard District

One South Street
Battery Park Building
New York, NY 10004-5073
Staff Symbol: obr
Phone: (212) 668-7165
Fax: (212) 668-7967

WFO D

16591/0.1H/
LITTLE BAY/NH
August 20, 2003

Ms. Kathleen O. Laffey
Division Administrator
Federal Highway Administration
279 Pleasant Street, Suite 204
Concord, NH 03301-7502

Dear Ms. Laffey:

We have received your letter of 16 July 2003 concerning the Spaulding Turnpike (NH Route 16) project and look forward to working with you on this priority transportation project.

It is anticipated that we will have no problem meeting the milestones where our input is required. We only request that we be advised as far in advance as possible on any occasion where our physical presence is requested. Additionally, the purpose and needs statements are acceptable to us.

Please contact Ernie Feemster, the project manager at (212) 668-7994 for direct coordination on this matter.

Sincerely,

for Ernest J. Feemster
Gary Kassof
Chief Bridge Branch
First Coast Guard District
By direction of the District Commander

51425

STATE OF NEW HAMPSHIRE
DEPARTMENT of RESOURCES and ECONOMIC DEVELOPMENT
DIVISION of PARKS and RECREATION
172 Pembroke Road P.O. Box 1856 Concord, New Hampshire 03302-1856
OFFICE of RECREATION SERVICES

GEORGE M. BALD
Commissioner

RICHARD MCLEOD
Director
603 271-3556

FAX 603 271-2629
WEB: www.nhparks.state.nh.us
E-MAIL: nhparks@dred.state.nh.us

October 20, 2003

Mr. Rob Vincent
Vanasse Hangen Brustlin Inc.
Kilton Road
Six Bedford Farms, Suit 607
Bedford NH 03110-6532

Re: Spaulding Turnpike Improvements Project, Newington-Dover

Dear Mr. Vincent:

This letter is in response to your request for information regarding any Land and Water Conservation Fund (LWCF) properties that may be impacted by the above referenced project. Upon review of our files, I have found that there are **no Section 6(f) properties** located within the project area.

Unless changes to the proposed project occur, no further approval is required from this office. If I may be of any further assistance, please contact me at the above address or by email at jroy@dred.state.state.nh.

Sincerely,

Jennifer Roy
Program Assistant

OFFICE OF ENERGY and PLANNING
NEW HAMPSHIRE COASTAL PROGRAM
STATE OF NEW HAMPSHIRE
152 COURT STREET: SUITE 1 - PORTSMOUTH NH 03801
TELEPHONE: 603-431-9366
FAX: 603-431-1438

26 March 2004

Mr. Christopher M. Waszczuk, P.E.
Project Manager
NH Department of Transportation
Bureau of Highway Design
John O. Morton Bldg, 7 Hazen Drive
Concord, NH 03302-0483

Re: Scoping Report; Newington-Dover NHS-027-1(37), 11238

Dear Mr. Waszczuk:

Thank you for the opportunity to comment on the subject document, sent under your 3 Mar 04 cover letter. The project has major impact on many facets of the NH Coastal Zone. Since we last corresponded, NH Coastal Program has received NOAA approval to extend the inland boundary of our coastal zone from a narrow strip around tidal waters to the full surface area of the 17 "coastal" municipalities (Dover, Newington, Portsmouth for this project). Thus, the entire expanse of the project's setting (Section 1.2) is now within the NH Coastal Zone. Our office has undergone reorganization and several of our specific comments attempt to correct the applicable organizational terminology (e.g. substitute "OEP" for "OSP").

We are still very interested in water quality, habitat (wetlands and other), historical, and public access issues, as noted in our July 2003 correspondence. Because Hilton Park will most likely be impacted by the project, we stress that you seek to mitigate with improvements to this important public (coastal) access point. This area of the coastal zone needs an all-tide boat launch/ramp for access by state residents. The NH Fish & Game Department is also interested in such an access point.

Additionally, on the subject of "access," the NH Coastal Program stresses the need to maintain a bike path across this waterway. Currently, the old General Sullivan Bridge serves this function. We urge that with whatever construction option is selected for bridge makeover, public access via a bike path be included.

We offer the following corrections/suggestions for change to the Scoping Report:

Page	Paragraph	Section	Comment
1-2	1-1	4th bullet	Change "NHOSP" to "NHOEP"

Page	Paragraph	Section	Comment
2-5 2-6	2.4.1	Pease Spur	Should you not say there is "little potential" for rail use in this corridor since use of the "at grade" crossing of the Spaulding Turnpike would create conflict with the project's goals to address congestion problems and improve roadway safety in this auto corridor?
3-2	3.1	Glaciofluvial soil para	Is the last sentence (5%) correct? That number does not correspond to the area in Figure 3.1.-1, considering that Pomeroy Cove is equal to "one percent." Your other soil percentages may have to be recalculated.
3-6	3.2.2	Watersheds	Figure 3.2-1 depicts lines with watershed "boundaries." You should add a statement to 3.2.2 to the effect that "Tidal cycles can shunt flow in all directions between identified watersheds."
3-6	3.2.4	Piscataqua R.	Line 6 – change "12" to "2" to indicate the correct distance to the Cocheco/Salmon Falls confluence.
3-18	3.2.9	top para	Correct 2nd last sentence to read "A project to expand the turning basin (vice 'dredge the channel') is…" as a more detailed description.
3-36 Map	3.6.3 3.1-1	Intertidal Wetlands	Our restoration staff notes that review of maps 3.1-1 and 3.6-1 indicates that previous filling for the General Sullivan and Bay Bridges may have destroyed fringing intertidal marsh around Pomeroy Cove, Bloody Point, and Tricky Cove. Very little fringing marsh remains on the northern edge of Tricky Cove. Map 3.1-1 depicts all the soils underneath the highway between Tricky Cove and Bloody Point as "marine/lacustrine." From field investigations, our staff considers it highly likely that these soils should probably be categorized as "anthropogenic."
3-75	3.11.2	first para	Change "OSP" to "Office of Energy & Planning."
3-76	3.11.2	last para	Change "NHOSP" to "NHOEP" twice.
3-76	3.11.2.1	Dover 1st para	In describing Hilton Park, there should be some language acknowledging the current difficulties in launching small motorized watercraft from the existing boat launch. It is somewhat dangerous for one person to launch from the site which makes it difficult for recreational fishing activity in Great Bay. This paragraph should also describe more completely the current condition of the boat launch – which NH Fish & Game staff should be able to provide.

Page	Paragraph	Section	Comment
3-77	3.12	2nd para	The second sentence implies there is vegetation in the highway median; there is no vegetation between north and southbound lanes.
3-90	3.13.2.2	1950-Present	The text should be expanded to clearly explain in what years the first Little Bay Bridge was built, and follow-up with the date of the additional two lanes. Other parts of the Scoping Report discuss this; it should be told here too.
4-2	4-2	Water Quality Para #2	Either remove "OSP" or reword as "the then OSP."
4-9	4.11	Community Environment	You could introduce the above-mentioned concept of the "all tide" boat launch/ramp in this section.
4-13	4.15	Coastal Zone Management Consistency	Change "NHOSP" to "NHOEP."
4-14	4.15	Section 4(f)	You could comment on the above-mentioned concept of the "all tide" boat launch/ramp in this section also.

The NH Coastal Program remains committed to participating in the review of this significant project. We appreciate the opportunity for public dialogue on the issues, since a formal public hearing is an integral part of a consistency review. We hope that these inputs to the Scoping Report add value toward the next steps. Contact me or the Acting Coastal Program Manager Ted Diers at 431-9366. After the last reorg, my e-mail is brian.mazerski@nh.gov.

Sincerely,

Brian K. Mazerski

Brian K. Mazerski
Federal Consistency Coordinator

cc: Richard Tichko, NHF&G

New Hampshire
Fish and Game Department

Region 3

225 Main Street, Durham, NH 03824-4732
(603) 868-1095
Headquarters: 11 Hazen Drive, Concord, NH 03301
(603) 271-3421

FAX (603) 868-3305
TDD Access: Relay NH 1-800-735-2964
Web site: www.wildlife.state.nh.us

Lee E. Perry
Executive Director

April 2, 2004

Mr. Christopher M. Waszczuk
Project Manager
NH Department of Transportation
John O. Morton Building
1 Hazen Drive
PO Box 483
Concord, NH 03302

Subject: Newington-Dover Bridge Scoping Report

Dear Mr. Waszczuk,

New Hampshire Fish and Game Department, Marine Fisheries Division, has reviewed the subject report. Generally, we find this document complete and very informational. However, as with any broad scale treatment of such a complex and multi-faceted project, there are specifics that elicit comment. Our comments are restricted to sections 1, 3 and 4, which are areas we feel especially qualified to evaluate.

Our point by point comments follow:

- P. 1-18 - The mention of New Hampshire Fish and Game Department's study of future modification to the Hilton Park boat ramp might also note that some consideration has also been given to a new site across the river on the Newington side (near Bloody Point).

- P. 3-1, para 2 - The Cocheco River (along with the Salmon Falls River) should be recognized as part of the Great Bay Drainage and Coastal Watershed.

- P. 3-5 - The title for the state's river program is The New Hampshire Rivers Management and Protection Program.

- P. 3-9 - The Piscataqua supports a robust population of transient river herring of the genus *Alosa*. Very few (if any) *Clupea* are in the river as resident adults.

- P. 3-9 - Little Bay: Throughout this report, there is no distinction made between Upper Little Bay and Lower Little Bay. Such a distinction may provide better understanding of this water body.

- P. 3-10 and 3-11 - Aquatic life: The polychaete worm genus, well represented in the study area, is *Nereis* (not *Neris*).

  The mention of black crappie (*Pomoxis nigromaculatus*) is fine as it is, in fact, a part of the coastal freshwater ichthyofauna. However, there are many other fresh water species far more representative of this distinction due to their wider distribution and greater abundance. In fact, the black crappie is an introduced species and is found most likely only in the Bellamy and Lamprey River systems.

- P. 3-14 - Pomeroy Cove - The mention of *Gasterosteus spp* is misleading. In fact, only one *Gasterosteus* is found in these waters, the three-spine *G. aculeatus*. Other sticklebacks in this area may be the four-spine (*Apeltes quadracus*) and nine-spine (*Pungitius pungitius*).

  New Hampshire Fish and Game Department believes there are clams (*Mya arenaria*) in the soft sediments of Pomeroy Cove and we have taken oyster in the area where the cove deepens toward the river channel.

- P. 3-43 - Several spelling errors of scientific binomials occur here. The quaking aspen is *Populus tremuloides* (*P. deltoids* [sic] is cottonwood). The genus for sharp-skinned hawk is *Accipiter*. The species name for gray fox is *cinereoargenteus*.

- P. 3-47 - New Hampshire Fish and Game Department has evidence of some very limited occurrence of seals other than harbor seals in Lower Little Bay. The large seal observed basking on a dock at Great Bay Marina was probably a gray seal (*Halichoerus grypus*). Also, Atlantic whitesided dolphin (*Lagenorhynchus acutus*) are sometimes seen in the Piscataqua River up as far as Hilton Park.

- P. 3-49, Table 3.7-1 - The commen tern is now annually present in Lower Little Bay during their breeding season. Known nesting sites include Hen Island which supported about 12 paired adults in recent years.

This concludes our comment. Should you have questions on any of the above, please feel free to contact me or Bruce Smith.

Sincerely,

Bruce Smith

John I. Nelson
Chief Marine Fisheries

JIN/BWS/rmj

cc: Lee E. Perry
Executive Director, NHF&G

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

April 5, 2004

OFFICE OF THE
REGIONAL ADMINISTRATOR

Christopher M. Waszczuk, P.E.
New Hampshire Department of Transportation
Bureau of Highway Design
1 Hazen Drive
P.O. Box 483
Concord, NH 03302-0483

Re: New Hampshire Department of Transportation's Scoping Report for the Spaulding Turnpike Improvements NHS-027-1(37), 11238 Newington to Dover. March 2004.

Dear Mr. Waszczuk:

We appreciate the opportunity to review the Scoping Report for Spaulding Turnkpike Improvements between Newington and Dover. With the exceptions discussed below, we believe the studies you are proposing to undertake will provide a good foundation on which New Hampshire Department of Transportation (NHDOT) and the Federal Highway Administration (FHWA) can base decisions about how best to solve mobility and safety problems in this corridor. The range of build and no-build alternatives to be evaluated is reasonable, and includes Transportation Demand Management, Transportation System Management, and transit as well as widening of the existing highway and bridges.

Study area

We have some concerns about the limits of the study area, and whether other nearby constraints will be assessed and integrated into any type of long-term solution. Our first concern is that the project study area stops just south of the Dover Toll Plaza. This toll booth, located just north of the bridge, may have a significant impact on traffic flow, and we believe the study area should be expanded to include it. We understand that NHDOT believes that the toll booth does not slow down traffic flow very often under current conditions. While this may be so, some of the alternatives (e.g., widening) will increase capacity and potentially bring much greater volumes of traffic to the toll booth. We recommend that NHDOT analyze whether the toll booth will serve as a bottleneck and impact that traffic flow. Clearly NHDOT will not want to solve one traffic problem only to have it reappear a mile further up the road.

Similarly, our second concern with the limits of the study area has to do with traffic flow and the Scammell Bridge, which is part of Rt. 4 and connects Durham to the Spaulding Turnpike. The Scammell Bridge carries one lane of traffic in each direction and is less than 1/4 mile from the Turnpike. The study area map appears to contain part but not all of the Scammell Bridge and thus it appears not to be part of the traffic analysis. We recommend that the entire bridge be included in the study of overall flow of traffic in the area.

Secondary and cumulative impacts

On the issue of secondary impacts, as we noted in previous correspondence, we believe the REMI method is a reasonable choice for estimating the economic and social impacts of the alternatives. We understand that after REMI is used to estimate employment, income, and population effects of the alternatives, NHDOT will assess potential implications of these alternatives on development and land use patterns. As we've discussed before, this step needs to include an assessment of environmental impacts of any identified secondary growth. If we can be of any assistance in this analysis, please contact Rosemary Monahan at 617-918-1087.

Regional Emissions Analyses

EPA disagrees with the position in the Scoping Report Document that a project-wide mesoscale analysis need not be conducted. See citation below from page 3-54:

> **"3.8.2 Regional Emissions**
> The proposed improvements to the Spaulding Turnpike must demonstrate that the regional emissions comply with the Transportation Conformity requirements. This project is included in the current Transportation Improvement Program and Transportation Plan. Therefore, ***a separate mesoscale analysis will not be conducted.*** The air quality analysis will document and summarize the proposed project's compliance with the Transportation Conformity requirements."

The proposed Spaulding Turnpike Improvements Project is located within the Portsmouth-Dover-Rochester ozone serious nonattainment area which consists of a portion of Rockingham County (*Exeter Town, Greenland Town, Hampton Town, New Castle Town, Newfields Town, Newington Town, Newmarket Town, North Hampton Town, Portsmouth City, Rye Town, Stratham Town*) and Strafford County, New Hampshire.

While EPA has previously determined in a final rulemaking action (June 9, 1999, 64 FR 30911) that the Portsmouth-Dover-Rochester ozone serious nonattainment area had attained the National Ambient Air Quality Standard (NAAQS) for one-hour ozone, the Portsmouth-Dover-Rochester area has not been re-designated, and remains a nonattainment area for the one-hour ozone standard. As a nonattainment area the Seacoast Metropolitan Planning Organization, the New Hampshire Department of Transportation, and the U.S. Department of Transportation must continue to demonstrate that their transportation plans and transportation improvement programs conform to the New Hampshire State Implementation Plan for air quality. For this reason EPA believes environmental analyses prepared for the Spaulding Turnpike Improvements Project should evaluate the ozone precursors (volatile organic compounds and nitrogen oxides) associated with the no-build and each of the proposed build alternatives for the three proposed time frames; (1) year 2003 current base traffic conditions, (2) year 2013 estimated year of project completion, and (3) year 2025 project design year. These regional emission analyses (project mesoscale analysis) will serve to identify future levels of ozone precursor emissions in the area that may have to be offset in order to achieve the current one-hour ozone standard or the more restrictive eight-hour ozone standard. As you may know the proposed project area is located within New Hampshire's proposed eight-hour ozone nonattainment area. EPA plans to designate the boundaries of New Hampshire's eight-hour ozone nonattainment areas in a Federal Register

rulemaking action on or before April 15, 2004.

EPA's MOBILE6.2 Motor Vehicle Emission Model

On February 24, 2004, EPA released a final version of MOBILE6.2 which should be used to develop mobile source emission factors for the regional ozone (precursor analyses of volatile organic compounds and nitrogen oxides) - mesoscale air quality analyses as well as the microscale carbon monoxide air quality analyses. The MOBILE6.2 emission factor model and supporting user guide and technical documents is available on EPA's Office of Transportation and Air Quality web site at URL address http://www.epa.gov/otaq/m6.htm .

MOBILE6.2 input files and all air quality modeling assumptions should be coordinated with the New Hampshire Department of Environmental Services - Air Resources Division and EPA New England's Air Quality group. The EPA contact is Donald O,. Cooke (Office of Ecosystem Protection, One Congress Street, Suite 1100, mail code CAQ, Boston Massachusetts; telephone (617) 918-1668; fax (617) 918-0668; and email cooke.donald@epa.gov.

Construction Phase Air Quality Mitigation

Diesel Retrofits

As with most construction projects, diesel powered equipment will most likely be used in the Spaulding Turnpike Improvements Project. Many diesel vehicles, especially older ones, emit relatively high levels of air pollution, especially particulate matter. However, the emissions from older diesel construction vehicles can be controlled with cost-effective retrofit pollution control equipment, and this would clearly benefit the Towns of Newington and Dover. Retrofit control equipment includes either oxidation catalysts or particulate filters installed on the exhaust of the diesel engine, and the equipment is designed to reduce particulate matter, hydrocarbon and carbon monoxide emissions. We recommend that the environmental analysis explore the benefit of requiring diesel retrofits as part of the contract specifications for this project.

Low Sulfur Diesel Fuels

Additional NOx and particulate matter exhaust emission benefits can be achieved from simply using on-road diesel fuel (which has a lower sulfur content than off-road diesel fuel) in construction equipment. The use of more restrictive on-road low sulfur fuel or ultra low sulfur diesel fuel now available in the marketplace would achieve additional pollutant reductions. Low sulfur fuels should be considered in all contract specifications in conjunction with diesel retrofit requirements.

If you have questions about these comments please contact Tim Timmermann (Office of Environmental Review, 617-918-1025) or Donald Cooke (Air Quality Office, 617- 918-1668).

Sincerely,

Elizabeth A. Higgins, Director
Office of Environmental Review

Coastal Conservation Association of New Hampshire

Post Office Box 4084 • Concord, NH 03302-4084
Phone & Fax: (603) 731-2669 • E-mail - ccanh@worldpath.net
Web Address - ccanh.org

April 14, 2004

Mr. Christopher M. Waszczuk, P.E.
Project Manager
NH Department of Transportation
Bureau of Highway Design
John O. Morton Bldg, 7 Hazen Drive
Concord, NH 03302-0483

State Board of Directors

Robert A. Ferri
President

Michael J. Bartlett
Vice President

Michael Reeve
Treasurer

Peter Amarosa
Capt. Dave Beattie
David Bryan
Tom Decoster
Silas Gordon
Anthony Martino
Robert Mitchell
Rick Sharp
Donald L. Swanson
Capt. Peter A. Whelan
G. Ritchie White

Re: Scoping Report: Newington-Dover NHS-027-1(37), 11238

Dear Mr. Waszczuk:

Thank you for the opportunity to comment on the subject document. I know we have missed the April 12, 2004 deadline for comments, but we just recently became aware of the document and needed time to review it to develop our comments. The New Hampshire Chapter of the Coastal Conversation Association is a non-profit organization dedicated to the conservation of marine animal and plant life and other coastal resources, both inshore and offshore. Our objective is to promote, protect and enhance the present and future availability of these coastal resources for both the benefit and enjoyment of the public. We have 300 members here in New Hampshire and over 88,000 members along the Gulf and Atlantic Coasts all in 15 state chapters.

We are committed to improving access within the bay and rivers for our recreational fishermen, as well as many other user groups. The current difficulties in launching watercraft from the existing boat launch is the ability to launch alone. With no mooring space and somewhat strong currents at times, launching can be hazardous. Most importantly is the tide level restricts launching during the lower half of the tides. We have worked for several years with the NH Fish And Game Department to improve access to the bay.

From our review of the Scoping Report, it appears that Hilton Park will be impacted by this project. We noticed a lack of information regarding the NH Fish And Game Departments efforts to develop a full tides access site either at Hilton or in the general bridge area for state residents. We strongly urge that you review the needs of the various user groups who have been working to for some time to improve tidal access.

We hope that this information will be considered as the Scoping document is finalized and the project moves forward. If you have any questions or comments, feel free to contact us.

Regards,

Robert A. Ferri
President

Strafford Regional Planning Commission

2 Ridge Street, Suite 4
Dover, New Hampshire 03820-2505

Tel: (603) 742-2523 Fax: (603) 742-7986
e-mail: srpc@strafford.org

4/20/04

To: Chris Waszczuk, PE

From: SRPC Staff

Date: April 14, 2004

Re: Newington Dover Scoping Report: Notes & Comments:

The Strafford Regional Planning Commission focused its review on the conceptual alternatives section in Chapter 2 and the transportation and socio economic sections of chapter 3.

The Newington-Dover Scoping Report effectively established, the purpose and need statement, the study limits, a summary of conceptual alternatives, a description of the existing environmental, socio-economic, cultural and historic resources in the study area. The report provided excellent documentation of known issues or constraints in the study area with respect to potential alternatives.

SRPC would like to offer the following comments for consideration as the project continues to progress towards the draft EIS stage.

Section 2.4 Transportation Demand Management Strategies:

SRPC would like to see an explanation as to why NHDOT believes the likely success of mandatory TDM strategies is low.

Perhaps no other project in the state lends itself to implementation of Transportation Demand Management (TDM) strategies like the Newington-Dover Project. Socio-economic, recreational resources and environmental constraints severely limit the number and scope of the alternatives that can be considered as well as increase the cost of the overall project. The geography of Great Bay forces circuitous alternate routes that in most cases are infeasible and have there own set of constraints that limit their ability to relieve congestion at the bridge.

The document lists several TDM strategies ranging from the common park-and-ride/ ride share concept and transit usage to the more radical travel restrictions and congestion pricing. The document goes on to state: "At this time the likelihood of success in implementing mandatory or overly restrictive strategies for either motorists or employers, or both is low."

The document then lists strategies that now, or in the future, are worthy of more in depth evaluation. SRPC recommends expanding the list to include employer-based strategies, like telecommuting and work hour management as well as expansion of bicycle infrastructure.

SRPC recognizes that TDM is not a complete solution to the array of problems in the project area. An investment needs to be made to correct geometric and engineering deficiencies. Developing and implementing effective TDM strategies as part of the overall solution could greatly reduce the size of the investment needed to correct these problems.

Section 2.4.4 Bicycle Transportation

SRPC recommends expanding this section to include a discussion of on and off road bicycle routes between Dover/Durham and Pease/Portsmouth as part of this study.

The document states that the existing bicycle system connectivity will be maintained. This is critical to keeping the bicycle as a viable means of transportation around Great Bay. Bicycling is an important and viable TDM strategy that can have a small but measurable impact during the summer season when daily traffic volumes are at their peak as shown in figure 3.15-5.

The draft EIS should investigate possible improvements to bicycle infrastructure through the study area. Low cost should improvements, re-striping, bicycle loop detectors and improvements to signage should be considered for implementation. NHDOT should coordinate with Seacoast MPO staff and the Greater Portsmouth TMA to promote bicycling as an alternative mode of transportation through the study area.

Section 2.4.3 Park and Ride Facilities

SRPC encourages NHDOT to investigate new possible new park and ride locations as part of the EIS process.

The discussion of Park and Ride facilities in the document clearly demonstrates a need for investment in this TDM strategy. None of the existing facilities identified in the document are likely to have a significant impact on commuter behavior. In addition SRPC would encourage DOT to work with Seacoast MPO staff and the Greater Portsmouth TMA to promote ridesharing along the Spaulding corridor.

A proposed 280 space park and ride lot in the vicinity of Exit 9 in Dover was recently recommended by CMAQ Advisory Committee. While not yet part of the Ten Year Plan progress on this project should be monitored for possible inclusion in the Draft EIS as part of a future year TDM alternative. The GACIT will be recommending this project for inclusion in the Ten Year Plan by May 15, 2004.

Section 3.15.2.5 Traffic Forecasting

Minor correction, the Seacoast MPO consists of communities from Carroll, Strafford and Rockingham Counties.

Section 3.15.6.2 Bus Services

SRPC recommends checking with Steve Pesci at UNH on the status of CNG fleet replacement and filling station project prior to publication of the draft EIS.

Sections 3.15.6.4 through 3.15.6.6

The resulting EIS should contain a detailed and comprehensive analysis and implementation plan for ride share TDM strategies and other initiatives.

TDM Summary:

NHDOT has a responsibility to protect, preserve and maintain the millions of dollars already invested into New Hampshire roadways. SRPC recognizes that an investment needs to be made to correct existing engineering and geometric deficiencies in the project study area.

Behavior change takes time to evolve and implement. Developing and implementing effective TDM strategies now, as part of the overall solution could reduce the size of the investment needed to correct existing problems and reduce the likelihood that MPO staff will be sitting here in 20 years writing this same paragraph.

Socio-Economic Conditions

Section 3.10

SRPC believes that the municipalities of Strafford, Northwood and Nottingham should be included in the Socio-Economic Study area.

It is our belief that journey to work data supports this request. For example journey to work data shows a 94% increase in commutes to Newington/Portsmouth from Strafford between 1990 and 2000. Residents of these towns are far more likely to travel through the study area during peak hours than residents from East Kingston, Kensington, and Brentwood.

Section 3.10.3 and Tables 3.10-5 and 6

SRPC believes that the striking difference in land use, as epitomized by type, number, density, and assessed value of the properties, between the two communities of Newington and Dover highlights the concerns of the communities to the north of the bridge.

The bridges serve as the portal to affordable housing to the north and as the portal to commerce and employment to the east and south. Quality of life factors directly related to transportation, including commute time, highway safety, and connectivity, are important to these bedroom

STEVEN J. STANCEL
Director
steve.stancel@ci.dover.nh.us

288 Central Avenue
Dover, New Hampshire 03820-41
(603) 516-6008
Fax: (603) 516-6007
www.ci.dover.nh.us

City of Dover, New Hampshire

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

February 10, 2005

2/16/05

Mr. Christopher M. Waszczuk, P.E.
Project Manager
State of New Hampshire
Department of Transportation
1 Hazen Drive
PO Box 483
Concord, NH 03302-0483

Dear Mr. Waszczuk:
In response to your letter of January 6, 2005, I am including comments from my review of the Rationale Report. I have spoken with several citizens, staff and the Strafford Regional Planning Commission representative about the review comments below, and have added some of their concerns as well.

I have enjoyed working as a member of the ATF and with the Department of Transportation on this very important project for the City and the Seacoast region and hope to continue our mutual productive review and positive evolution of project plans.

Following are comments and concerns taken from the Rationale Report, dated January 2005:

1. Prepare a concept 3A for feasibility purposes that employs a 2 lane WB loop ramp at exit 6 that uses the same radius (footprint) but super elevates the pavement. Squeeze in the NB ramp without any takings.
2. The project must address what kind and where sound barriers would be placed/employed.
3. The west side Hilton Park Road must be closer to the water and the curve must be severe to maximize park area.
4. Impacts to the park cannot be 2.9 or even 2.2 acres. Alternatives as submitted by several ATF members should be presented/analyzed that reduces this impact.
5. It is apparent from the report and concept plans that many roadway initiatives on the Newington side are not required for this project. Said new off-line roads appear to be providing frontage and access for economic development and do not meet the purpose and need of the project. I submit

that the bridge must be built correctly for the future, even if it detracts from other roadway initiatives.

6. Rail Alternative 1A is a good idea and should be pursued, however Rail Alternative 4-freight rail into the Tradeport, while a good idea, does not meet the purpose and need of the project and should be dropped from consideration.
7. Bus Alternative 1 is a good idea, but there must be 30 minute headway times during commuter peak hours. Alternative 2 is good, however Alternative 3 as presented, will not serve local transit needs or the needs of the project any better than the "local" service that exists today.
8. HOV, HOT, and Zipper lane concepts do not appear to draw the needed users and therefore would be too costly to build and maintain. Said concepts should be dropped from consideration.
9. The Rationale Report should provide proof that a signal warrant will exist for the proposed northernmost signal set on Dover Point Road in Dover Alternative 3.
10. TSM - If an emergency gate is installed on the SB ramp from Boston Harbor Road, then signage would be needed to direct traffic to the SB ramp farther on. Is this gate really needed? Do volumes using this ramp during morning peak really warrant the need for closing this ramp? The report should address this.
11. Finally, on Page 6-3, section 6.1.3.2, third paragraph, it is stated that replacement options were eliminated because the 50 MPH speed limit mitigates the sub standard stopping sight distance. I disagree because it is not the speed that is the issue, it is the severe double vertical curve that slows the traffic and during weather events poses safety problems. Fixing this problem is part of the purpose and need of this project. Again, fixing or replacing the bridge correctly should not depend on funding alone; it should depend on doing it right for safety, and for the future needs of travelers. Both the bridge(s) and the on-line approaches should have priority for funding in this project, not off-line roadways. Fixing the vertical curve issue has a direct relationship to the future of the park on the Dover side of the river as well.

If you have any questions, please feel free to contact me at any time.

Sincerely,

Bruce W. Woodruff
City Planner/ATF Member

BWW/bww
Cc: Steve Stancel, Planning Director Mr. Jack Newick

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

February 11, 2005

Mr. Christopher M. Waszczuk
New Hampshire Department of Transportation
John O. Morton Building, 7 Hazen Drive
P.O. Box 483
Concord, NH 03302-0483

OFFICE OF THE
REGIONAL ADMINISTRATOR

RE: Rationale Report on Spaulding Turnpike Improvements, NHS-027-1(37), 11238

Dear Mr. Waszczuk:

In accordance with EPA New England's (EPA's) responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, we submit the following comments on the Rationale Report as part of the Environmental Impact Statement (EIS) for improvements to the Spaulding Turnpike in Newington and Dover, New Hampshire.

We believe the New Hampshire Department of Transportation (NHDOT) is proposing to carry forward a reasonable range of alternatives for further analysis in the Draft Environmental Impact Statement (DEIS). We understand that NHDOT proposes to evaluate alternatives in combination, as well as in isolation, and we believe that is critical. In particular, we urge NHDOT to evaluate a package of transit, Transportation Demand Management, & Transportation System Management in combination with highway widening and bridge replacement.

In response to comments on the Scoping Report, we understand that NHDOT intends to evaluate the operation, safety, and capacity of the Turnpike leading up to the Dover toll plaza. We believe this broader assessment is important to assess whether the transportation improvements being considered are likely to create a bottleneck at the toll plaza or the Scammell Bridge.

We are disappointed that NH DOT does not intend to conduct a separate mesoscale analysis, and ask the Department to reconsider. We reiterate our recommendation that NHDOT require diesel retrofits and use of low sulfur fuels as part of the contract specifications for this project.

Thank you for the opportunity to provide comments on the range of alternatives that will be carried forward into the Draft Environmental Impact Statement for the Spaulding Turnpike Improvements. Should you have any questions or wish to discuss our concerns, please contact Rosemary Monahan in the Office of the Regional Administrator at 617-918-1087.

Sincerely,

Elizabeth A. Higgins
Director, Office of Environmental Review

Strafford Regional Planning Commission

2 Ridge Street, Suite 4
Dover, New Hampshire 03820-2505

Tel: (603) 742-2523 Fax: (603) 742-7986
www.strafford.org
e-mail: srpc@strafford.org

Planning and action for sustainable development and an improved quality of life.

2/23/05

To: Christopher Waszczuk, P.E.
Project Manager

From: Cynthia Copeland, AICP
Executive Director

Date: February 18, 2005

Re: Newington Dover Bridge Rationale Report Comments

In response to your letter of January 7, 2005, SRPC is pleased to submit the following comments on the Newington Dover Rationale Report.

This project remains the highest priority for the Seacoast MPO. The Strafford Regional Planning Commission believes that continued cooperation will lead to positive evolution of project plans.

Following are comments and concerns taken from the Rationale Report, dated January 2005:

General Comments

The Strafford Regional Planning Commission is encouraged by the range of alternatives to be carried forward into the DEIS.

The focus of the improvements should be on the bridge.

Limited funds and resources should be prioritized for safety improvements and capacity of the bridge and Turnpike. In fiscally constrained times the roadway initiatives on both sides of the bridge should simply meet the purpose and need of the project. Overall project design should not preclude access for future improvements and economic development initiatives funded by others.

Transportation Demand Management

SRPC is encouraged by the consideration of TDM in several of the alternatives proposed by NHDOT.

It would be helpful to quantify the level of effort and *proposed TDM implementation strategies for this project* associated with aggressive TDM and moderate TDM. Section 3.7.4 states *that moderate and aggressive TDM programs are projected to generate reductions of 4 percent and 7 percent, respectively, in work trips to the areas with programs*. There is no mention in this section or prior sections of the report as to what role, *if any*, the NHDOT will play in assisting

with the development of TDM programs to generate trip the reductions.

In addition the small difference in trip reduction between aggressive and moderate programs suggests that the level of effort to attain the higher trip reductions is not significantly different.

Therefore, SRPC encourages NHDOT to actively pursue aggressive TDM measures for all alternatives. NHDOT should also identify responsible parties, specific strategies and actions required to achieve or exceed the projected trip reductions. SRPC strongly believes that TDM should be a priority along the corridor and pursued with equal effort across all of the proposed alternatives.

HOV Alternatives

The reality that the geometric limitations of the immediate project area make HOV alternatives less feasible supports the need to think about ways to reduce VMT in the corridor. This reinforces the need to promote TDM measures and mode shift along the corridor and should be championed by this project.

We recognize that this project is likely to be the last major upgrade to the Little Bay Bridges. Therefore, SRPC supports the further study and development of all alternatives that will allow for ***future implementation*** of transit and HOV.

As the improvements resulting from this project approach capacity having the capability "built in to the bridge" to implement a future HOV or dedicated Transit lanes from the Dover toll (or further north) is a valuable asset and will likely be a necessity.

Rail Alternatives

Rail alternative 1A involves the expansion of existing Downeaster service between Dover and Boston. Discussion in section 3.8.1 suggests station stop improvements; a new layover facility and additional equipment are required for a fifth round trip between Dover and Boston. However, a current CMAQ project proposal submitted by NNEPRA suggests the fifth round trip can occur with $1.2 million in track improvements and existing equipment. This is significantly less than described in the rationale report.

Bus Alternatives

SRPC supports the bus alternatives presented in the rationale report. The success of these improvements depends heavily on the headway time between busses. This is particularly true for local improvements described in Bus alternative 3. Efforts should be made to reduce headway time for local busses to 15 minutes. Bus Alternative 1 might be better served by 30-minute headways.

Bicycle and Pedestrian Access

Currently the General Sullivan Bridge serves as the only pedestrian connection between Newington and Dover. Throughout the project development process it has been made clear that the existing bicycle system connectivity will be maintained. This is critical to keeping the bicycle as a viable means of transportation around Great Bay. Bicycling is an important and viable mode of transportation that can have a small but measurable impact during the summer season when daily traffic volumes are at their peak.

The draft EIS should investigate possible improvements to bicycle infrastructure surrounding the study area. Low cost shoulder improvements, re-striping, and improvements to signage should be considered for implementation.

NHDOT should coordinate with Seacoast MPO staff, Seacoast Area Bicycle Routes (SABR) and the Greater Portsmouth TMA to promote bicycling as an alternative mode of transportation through the study area.

Rehabilitation of the General Sullivan Bridge:
SRPC supports the rehabilitation of the General Sullivan Bridge (GSB) for use as a dedicated transit way and bicycle/pedestrian facility. Reasons for this position are listed below.

- Having the General Sullivan Bridge available provides redundancy in transportation system by providing an alternative route for both transit and emergency vehicles. Is it possible to investigate alternative funding sources such as homeland security funds to provide this redundancy in the transportation network?

- If the rehabilitation of the General Sullivan Bridge is phased early in the project construction it may be available for transit use during the construction of the main line.

- Provides opportunity for a complete local transit service around Great Bay. Assuming the project develops improvements in Newington similar to Alternatives 10 through 12, a rehabilitated General Sullivan Bridge would allow improved local transit service between the Pease Tradeport, Newington and Dover. It would also allow for a local transit connection between Greenland, Stratham and Dover via Newington.

- Maintaining the General Sullivan Bridge provides an alternative route for transit and emergency vehicles when the new Little Bay Bridges reach capacity.

- Maintaining the General Sullivan Bridge for bicycle use is important to the future growth of bicycle transportation in the region. SRPC believes that providing bicycle and pedestrian access attached to a widened Little Bay Bridges structure will detract from the current level of bicycle traffic crossing the bay and discourage growth of the bicycle transportation between Portsmouth, Newington and Durham Dover.

  The physical distance between the General Sullivan Bridge and Little Bay Bridges provides an adequate buffer from dust and debris generated by traffic as well as an important psychological barrier.

As always we appreciate this opportunity to participate in this process and look forward to working with NHDOT towards the successful completion of this project.

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

February 25, 2005

Regulatory Division
CENAE-R-20043545

Mr. Christopher M. Waszczuk, P.E.
Project Manager NH DOT
Concord , NH 03302-0483

Subject: Newington-Dover11238 Rationale Report Range of Alternatives ok with Corps

Dear Mr. Waszczuk:

We are currently evaluating your project in accordance with the Clean Water Act and other applicable laws and regulations. Section 404(b)(1) of the Clean Water Act, known as the 404(b)(1) Guidelines, is found at 40 CFR 230. As you know, the Guidelines require avoiding and minimizing adverse impacts to waters and wetlands, and the selection of a Least Environmentally Damaging Practicable Alternative (LEDPA). Section 230.10 (a) states, "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences."

We have reviewed your Phase I or "Rationale" Report, dated January 2005, which describes, among other things, your screening of alternatives to avoid and minimize adverse impacts to waters and wetlands. At Section 6.2 of your Report you recommended a range of alternatives be carried forward into the DEIS for further analysis. We agree that this is a reasonable range of alternatives for further study and will provide the necessary documentation to allow the Corps to determine the LEDPA.

If you have any questions, please contact Richard Roach, of my staff, at (978) 318-8211.

Sincerely,

Christine Godfrey
Chief, Regulatory Division

The Town of Newington
New Hampshire

Incorporated 1764

PLANNING BOARD

October 18, 2005

Spaulding Turnpike Advisory Committee
c/o Christopher Waszczuk, Project Manager
NH Department of Transportation
P.O. Box 483
Concord, NH 03302

RE: Spaulding Expansion

Dear Mr. Waszczuk & Committee Members:

Turnpike Alternatives 10A, 12A & 13 were recently examined by the Newington Board of Selectmen, the Planning Board, and the Conservation Commission. We are writing to inform you that Alternative 13 best meets our criteria for turnpike design. We endorse Alternative 13 with the understanding that some design elements are to be further refined.

The elevation of the future turnpike is the issue of greatest concern to us. A depressed turnpike such as that exemplified by Alternative 13 would have a moderate acoustical impact on our residential district. An elevated turnpike as proposed in Alternatives 10A & 12A would have a severe impact on our residents.

We reiterate our request of July 26 that you reject plans that call for an elevated turnpike.

We look forward to working with you on refining the Alternative 13 design. Thank you for your attention to this matter.

Yours truly,

Cosmas Iocovozzi, Chair
Board of Selectmen

Albert Hislop, Chair
Planning Board

Margaret Lamson, Chair
Conservation Commission

205 Nimble Hill Road • Newington, NH 03801 • (603) 436-1252 • Fax (603) 436-7188 • Email: newington@ttlc.net

11C am. 05-19

Resolution Re: COUNCIL SUPPORT OF NEWINGTON-DOVER PROJECT ALTERNATIVE THREE

WHEREAS: The Spaulding Turnpike is eastern New Hampshire's major limited access North-South highway linking the Seacoast area with the major areas of New Hampshire and is included in the State of New Hampshire ten-year Transportation Improvement Program to address safety concerns and increased congestion in the approximately 3.5 mile section of the Spaulding Turnpike extending north from Exit 1in Newington to the Dover Toll Plaza, and

WHEREAS: The purpose of this project is to improve transportation efficiency and reduce safety problems, while minimizing social, economic and environmental impacts which through development and refinement of infrastructure improvement alternatives and both Advisory Task Force and public input over the last 20 months has resulted in the recommendation of support for Alternative Three; and

WHEREAS: Alternative Three infrastructure improvements are the result of careful study and deliberation of the Advisory Task Force members from Dover who where charged with working to ensure that the impacts to Hilton Park and the entire Dover Point area would be to the smallest extent possible, and also takes into consideration the NH Division of Historic Resources emphasis that the General Sullivan Bridge is a highly rated and valued historic resource and should be considered for rehabilitation and viable reuse; and

WHEREAS: The City Council met in a workshop on October 5, 2005 at which time Alternative Three was presented by representatives of the State of NH Department of Transportation resulting in a general consensus to support this alternative with several revisions.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND DOVER CITY COUNCIL THAT:

The Dover City Council supports the Newington-Dover Project Alternative Three, including the revised location for the cross-turnpike access road, for Dover turnpike improvements.

FURTHER BE IT RESOLVED THAT:

The Council supports the rehabilitation and re-use of the General Sullivan historic bridge structure as an alternative transportation facility, thereby retaining the second highest rated historic resource in the entire state for present and future generations; and

JRTHER BE IT RESOLVED THAT:

The proper State agencies are requested to coordinate, fund, and implement improvements to and replacements of inadequate, unsafe or missing boating infrastructure at Hilton Park as soon as possible; and

FURTHER BE IT RESOLVED THAT:

The Dover City Council also endorses and encourages the NHDOT to add noise reducing barriers along the Spaulding Turnpike north of exit 6 as outlined and presented on November 7, 2005 public hearing at Dover City Hall. This is to compliment the sound barriers currently planned for properties along Boston Harbor road, Dover Point Road and the Wentworth Terrace area; and

FURTHER BE IT RESOLVED THAT:

The Dover City Council further endorses and encourages the NHDOT to add a sidewalk along the Boston Harbor/Dover Point Road corridor connecting Boston Harbor Road to Hilton Park through Bittner Pass along Pomeroy to Dover Point Road. Traffic along this corridor shall substantially increase due to restructuring of traffic patterns. The sidewalk shall be added under the Spur Road connector linking Spur Road to Boston Harbor Road; and

FURTHER BE IT RESOLVED THAT:

The Dover City Council wishes to encourage the NHDOT to strongly consider the Blackwater Brook property as its site for its 40 acre wetland mitigation.

Approved as to form: 11.20.06

Legal Division Representative

Sponsored by:

Mayor Scott Myers
and the Dover City Council

Recorded by:

Judy Gaouette, City Clerk

Regular Meeting held October 12, 2005. Hindle moved to adopt, seconded by Mayberry. Mayberry moved to refer to November meeting, seconded by Trefethen. Motion passed on a 7-0 vote.
Regular Meeting held November 9, 2005. Hindle moved to adopt, seconded by Mayberry. Mayberry moved to amend by adding 3 additional further be it resolved clauses, seconded by Perry. Motion passed on a 9-0. Motion to adopt as amended passed on a 6-3 vote, DeDe, Trefethen and Keays opposed.

The Town of Newington
New Hampshire

Incorporated 1764

PLANNING
BOARD

December 21, 2005

Spaulding Turnpike Advisory Committee
c/o Christopher Waszczuk, Project Manager
NH Department of Transportation
P.O. Box 483
Concord, NH 03302

RE: Spaulding Expansion

Dear Mr. Waszczuk: 1/18/06

We are in receipt of your letter of December 1, 2005 seeking comment on the proposed rail spur to Pease. The proposal was discussed by the Newington Board of Selectmen, the Planning Board, and the Conservation Commission.

We are writing to advise you that we have no objection to an elevated rail spur to Pease along the existing rail corridor laid out by the Air Force in the 1950's. In fact we strongly support the proposed rail re-construction because it would mitigate traffic congestion and spur economic development.

We look forward to working with you on refining the Alternative 13 design. We appreciate this opportunity to comment on the project.

Yours truly

Cosmas Iocovozzi, Chair
Board of Selectmen

For Albert Hislop, Chair
Planning Board

Justin Richardson, Vice Chair
Conservation Commission

205 Nimble Hill Road • Newington, NH 03801 • (603) 436-1252 • Fax (603) 436-7188 • Email: newington@ttlc.net

STEVEN J. STANCEL
Director
steve.stancel@ci.dover.nh.us

288 Central Avenue
Dover, New Hampshire 03820-4169
(603) 516-6008
Fax: (603) 516-6007
www.ci.dover.nh.us

City of Dover, New Hampshire

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

December 27, 2005

Christopher Waszczuk
NHDOT
P.O. Box 483, Hazen Drive
Concord, NH 03302

RE: Tuttle Farm

Dear Mr. Waszczuk:

Enclosed please find a copy of the resolution that the Dover City Council unanimously passed on December 14, 2005. This resolution approved an appropriation of $1,500,000 to purchase the development rights for 64.5 acres of the historic Tuttle Farm property. As part of this resolution, you will also see that the City Council strongly encourages the NH Department of Transportation to consider the Tuttle Farm property as the highest priority of the sites for the wetland mitigation program associated with the Newington-Dover Project.

As I have discussed with you previously, this is a unique opportunity to protect a very significant landmark property. As the report from Jacob Tinus of VHB details, the Tuttle Farm has a diverse habitat of active agricultural fields, wooded landscapes and tidal and non-tidal wetlands. By partnering with the Strafford Rivers Conservancy, the entire property is slated for protection. Our goal is to use the City funds as match for additional state and federal funds.

Regarding the City's recommendation on the use of the NHDOT wetland mitigation funds associated with the Newington-Dover project, we have asked the Dover Conservation Commission and the Dover Open Lands Committee (OLC) to discuss this issue during their next meetings and provide us with their recommendations. We will forward the City's recommendation to you after receiving input from the OLC meeting on January 5th and the Conservation Commission meeting scheduled for January 9th.

Sincerely,

Steve Bird
City Planner

Enclosure (1)

Cc: Tom Fargo, Dover Conservation Commission
Marcia Colbath, Dover Open Lands Committee
Anna Boudreau, Strafford Rivers Conservancy Executive Director

RESOLUTION

Re: AUTHORIZATION FOR THE PURCHASE OF A CONSERVATION EASEMENT BY THE CITY OF DOVER

WHEREAS: William Penn Tuttle III is the owner of four parcels totaling approximately 142 acres located off Dover Point Road and Middle Road, said parcels known as Map M, Lots 52, 53-A, & 54 and Map L, Lot 1; and

WHEREAS: This property, known as the Tuttle Farm, is the oldest family-owned farm in the United States and has a long and celebrated history. The farm's history is tied to the early colonial history of Dover and the Seacoast region. William Penn Tuttle III is the 11th generation Tuttle to work these fields, carrying on a tradition of family farming that has existed for over 300 years; and

WHEREAS: The farm lies between the tidal waters of the Bellamy and Piscataqua Rivers with 1,000 feet of frontage along Little John's Creek and 1,200 feet of frontage along Varney Brook. The land contains tidal and non-tidal wetlands, streams, and prime agricultural soils, as well as the impressive scenic vistas viewed from Dover Point Road; and

WHEREAS: The City of Dover partnered with The Strafford Rivers Conservancy, a local non-profit corporation dedicated to land conservation, to work to protect the entire Tuttle Farm property. The City holds a purchase and sales agreement with the William Penn Tuttle III to protect 64.5 acres (copy attached). The Strafford Rivers Conservancy has a purchase and sales agreement with the owner to protect an additional 72.6 acres for a total of 137.1 acres. (see attached map). Five acres of the property are not included in the protected area; and

WHEREAS: Consistent with the City of Dover Master Plan, the Dover Conservation Commission and the Open Lands Committee have identified and approved the Tuttle Farm as an ideal property to be placed under conservation protection; and

WHEREAS: William Penn Tuttle III has agreed to sell the development rights on a 64.5 acre portion of the Tuttle Farm (see attached map) to the City of Dover contingent on City Council approval; and

WHEREAS: The Conservation Commission held a public hearing on November 7, 2005, to discuss the purchase of a conservation easement for the Tuttle Farm; and

WHEREAS: The City of Dover Open Lands Committee and Conservation Commission have both voted to recommend the city's purchase of the development rights for $1,500,000; and

WHEREAS: The City of Dover and The Strafford Rivers Conservancy have identified additional funding sources to match the City funding, including the New Hampshire Land and Community Heritage Investment Program (LCHIP), the Farm and Ranch Land Protection Program, and in particular, the New Hampshire Department of Transportation's Newington-Dover Project, which has funding available to mitigate the wetland impacts of the project;

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND DOVER CITY COUNCIL THAT:

The City Manager is hereby authorized to expend a total amount of $1,500,000.00 from the FY04 and FY05 CIP bond authorizations to purchase development rights in the name of the City of Dover, NH

and its Conservation Commission, for a 64.5 acre portion of the parcels known as Tax Map M, Lots 52, 53A and 54. The City Manager and the Conservation Commission are also authorized to complete the studies or surveys necessary, subject to City Purchasing regulations, to effectuate the acquisition of the conservation easement on the properties. Funding for this purchase will be charged to the following account:

ACCOUNT #	*DESCRIPTION*	*BALANCE*	*CHARGE*
4004-41910-4710-2503-04-18	Development rights	$860,000.00	$860,000.00
4004-41910-4710-2503-05-18	Development rights	$1,000,000.00	$640,000.00

FURTHER BE IT RESOLVED THAT:

The Dover City Council strongly encourages the NH Department of Transportation to consider the Tuttle Farm property as the highest priority of the sites for its wetland mitigation program associated with the Newington-Dover Project.

Approved as to form:

Allan B. Krans Sr.
City Attorney

Recorded by:

Judy Gaouette, City Clerk

Approved as to Funding:

Jeff Harrington
Finance Director

Sponsored by:

Scott Myers, Mayor

Jason Hindle, Mayor Pro Tem

Robert Lewis, Councilor

Douglas DeDe, Councilor

Robert Keays, Councilor

Matt Mayberry, Councilor

Dean Trefethen, Councilor

Otis Perry, Councilor

Darlene Colwell-Ellis, Councilor

Regular Meeting held December 14, 2005.
DeDe moved to suspend the rules to move item up on the agenda, seconded by Mayberry. Motion passed on a 6-3 roll call vote, Hindle, Keays and Trefethen opposed.
Hindle moved to adopt, seconded by Mayberry.
Motion passed on a 9-0 roll call vote.

The City Manager recommends this Resolution be adopted.

J. MICHAEL JOYAL, JR
City Manager
m.joyal@ci.dover.nh.us

288 Central Avenue
Dover, New Hampshire 03820-4169
(603) 516-6023
Fax: (603) 516-6049
www.ci.dover.nh.us

City of Dover, New Hampshire

OFFICE OF THE CITY MANAGER

January 17, 2006

1/23/06

Christopher Waszczuk
NHDOT
P.O. Box 483, Hazen Drive
Concord, NH 03302

RE: Tuttle Farm & NHDOT Funding

Dear Mr. Waszczuk:

As you know, on December 14, 2005 the Dover City Council unanimously passed a resolution approving an appropriation of $1,500,000 to purchase the development rights for 64.5 acres of the historic Tuttle Farm property. As part of this resolution, the City Council strongly encouraged the NH Department of Transportation to consider the Tuttle Farm property as the highest priority of the sites for the wetland mitigation program associated with the Newington-Dover Project.

We had asked the Dover Conservation Commission and the Dover Open Lands Committee (OLC) for their recommendations on the distribution of potential NHDOT funds during their January meetings. On January 5, 2006 the OLC voted to recommend that all of the funding go to protect the Tuttle Farm. On January 9, 2006 the Conservation Commission voted to recommend that the Tuttle Farm be the top priority for the NHDOT funding and that any unused funds be directed to the Blackwater Brook area.

Based on the City Council resolution and the recommendations from the Open Lands Committee and the Conservation Commission, the City recommends that the Tuttle Farm project be the first priority for the use of the NHDOT wetland mitigation funds associated with the Newington-Dover project. Please let us know what other assistance you may need to accomplish this goal.

Sincerely,

J. Michael Joyal, Jr.
City Manager

Cc: Steven Stancel, Planning Director
Tom Fargo, Dover Conservation Commission
Marcia Colbath, Dover Open Lands Committee
Anna Boudreau, Strafford Rivers Conservancy Executive Director

Appendix B – Public Meeting Notes

Appendix B1 – Advisory Task Force Meetings

Transportation
Land Development
Environmental
Services

VHB Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees:

ATF Committee:
Chris Waszczuk, ATF Member
Chris Cross, ATF Member
Tom Fargo, ATF Member
Sandy Hislop, ATF Member
Jim Campbell, ATF Member
Marlon Frink, ATF Member
Bill O'Donnell, ATF Member
Jack Newick, ATF Member
Bruce Woodruff, ATF Member
John Burke, ATF Member
Maria Stowell, ATF Member
Steve Wells, ATF Member
Rick Card, ATF Member
Cliff Sinnott, Alternate ATF Member

Others:
Clifford Abbott
Roy Josselyn
Caroline Marshall, Portsmouth Chamber of Commerce
David Walker, Rockingham Planning Comm.
Cynthia Copeland, SRPC
Michael Goot, Foster's Daily Democrat
Frank O'Callaghan, VHB
Bill Oldenberg, NHDOT
Mike Dugas, NHDOT
Mark Laurin, NHDOT

Date/Time: April 30, 2003 6:30 PM

Project No.: 51425.00

Re: Newington-Dover (11238)
Advisory Task Force
Meeting No. 1

Place: Newington Town Hall

Notes taken by: Frank O'Callaghan

Chris Waszczuk opened the meeting by welcoming the attendees. He thanked the Advisory Task Force (ATF) members for accepting the invitation to participate in the study and asked each ATF member to introduce themselves and to identify their respective special interests in the study and their constituencies. Following the ATF member introductions, Caroline Marshall introduced herself as representing the Portsmouth Chamber of Commerce and sitting in on behalf of ATF member Peter Hamelin who was unavailable for the meeting. Chris Waszczuk distributed a Meeting Agenda, ATF membership list, a composite integrated time line schedule of the ACOE Section 404 permit process with highway projects and NEPA, a project schedule, a draft Project Purpose and Need Statement, a study area map and a Socio-Economic study area map. Utilizing

a power point presentation, Chris reviewed the meeting agenda and discussed the role and responsibilities of the ATF. The ATF will be a forum for providing input to the study team, and will provide a conduit for the distribution of study information to their respective constituents. The ATF is not a decision-making body, but is expected to review and comment on study materials, and forge consensus in advising the study team and in guiding the development of the project. Chris indicated that he expected the ATF to meet at least quarterly over the approximate 3-year study schedule, and that other public workshops and public information meetings would be held over the course of study. Chris also reviewed meeting protocol:

- Meeting would generally run from 6:30 PM to 9:00 PM.
- Format will generally include a Welcome (from Chairperson), statement of the function and purpose of ATF, review and adoption of previous meeting notes, presentations/agenda items, questions and comments from ATF, and questions and comments from the public.
- Agenda items will be established by the Chairperson.
- The public can request an agenda item, through the Chairperson.
- Roberts Rules-of-Order will govern meetings.
- NHDOT/VHB will record meeting notes.

Bill O'Donnell inquired as to the notification of meetings. While not legally required to be publicly posted, Chris Waszczuk stated that a mailing list of interest parties would be developed, in conjunction with the project's web site, public posting at Town Hall and City Hall, and posting in local papers – *Fosters Democrat*, the *Portsmouth Herald*, and the local Hampton papers. Chris Cross suggested posting by the Rockingham and Strafford Regional Planning Commission (web sites and newsletters) would also be appropriate. Marlon suggested that Southern Maine be included. [The Regional Planning Commission in southern Maine could be added to the mailing list for the project.]

Chris Waszczuk initiated the discussion on electing the ATF Chairperson. Both Marlon Frink and Chris Cross expressed interest in the chair; given the regional impact and importance of the project, Chris Cross suggested it was more appropriate for him, as the RPC representative, to chair the task force. Marlon stated that it was most important for the chairperson to be objective and to hold oneself in check. After some discussion, the task force unanimously elected Chris Cross as Chairman, and Marlon Frink as Vice Chairman.

Frank O'Callaghan then proceeded to describe the study area by referring to a number of aerial photographs and graphics. The study area extends along the approximate 3.5 mile section of the Spaulding Turnpike extending north from the Gosling Road/Pease Boulevard interchange (Exit 1) in Newington, across the Little Bay Bridges, to a point just south of the existing toll booth in Dover. He made reference to a 1996 summary of traffic flow and safety deficiencies that included Exits 3, 4, the Little Bay Bridges, Exit 5 and Exit 6 and which were identified in the recent Spaulding Turnpike Feasibility Study. He also stated that the average annualized daily traffic volumes on the Little Bay Bridges had increased by approximately 20 percent between 1996 and 2001. Frank also reviewed recent traffic accident experience within the study area noting that the total number of accidents (957) during the 1997-2001 period had increased substantially above the total number of accidents (575) for the previous (1992-1996) five-year period. He then described the Exit 4 Interim Safety Plan, a recommendation of the Feasibility Study, which addresses a number of current safety and traffic flow deficiencies associated with entering and exiting the Turnpike at River Road, Nimble Hill Road, the southbound to northbound turnaround (Exit 4N) and the southbound on-ramp from the grade separated turnaround from River Road. This plan is currently under design and scheduled to be constructed in 2005.

Frank then referred to a wall plan depicting issues and opportunities within the study area. In addition to the traffic flow and safety deficiencies which he had previously discussed, he noted the following: the sensitive environmental location including coastal wetlands and the marine ecology, potential historic and prehistoric resources, Hilton Park, the need to minimize impacts to residences and businesses – including noise, the potential for redevelopment, such as the former Drive Inn site, the new Industrial Connector roadway to River Road, and the state bicycle route along US 4 and Boston Harbor Road that traverses the General Sullivan Bridge to the Pease Tradeport via Nimble Hill Road. These are some of the issues and opportunities which will form the context within which the transportation improvement alternatives will be developed. Frank concluded his presentation by referring to a map of the Seacoast MPO communities which identified the 26 municipalities, including Dover and Newington, which would comprise the study area for the socio-economic impact study. This study would focus on the increment of future growth in population and employment that would be expected to occur as a result of the Newington-Dover project. At this point, Frank identified the subconsultant team who would be assisting VHB: RKG Associates would be conducting the socio-economic study; RSG would be responsible for the travel demand modeling; the Jackson Estuarine Laboratory at UNH would be responsible for the analysis of marine resources; the Mechanical Engineering Department at UNH would develop a hydrodynamic model of the current and tides within the general area of the existing bridges; Hardesty & Hanover would assist in the inspection and evaluation of the General Sullivan Bridge; Victoria Bunker and Associates would conduct the prehistoric/archaeological impact analysis; and the Preservation Company would be responsible for cultural and historic impact analysis.

A number of comments and questions followed Frank's presentation. Bruce Woodruff noted that the City of Dover was currently planning a bicycle route that would extend south from Spur Road, run along Boston Harbor Road, loop back under the Turnpike at Hilton Park, and run back north along the existing pedestrian/bicycle path adjacent to Dover Point and then proceed north along Dover Point Road. Bruce also underscored the importance of maintaining/enhancing the grade separated connection between Hilton Park on each side of the Turnpike. With respect to improving the navigability and reducing potential subsurface marine impacts, Tom Fargo suggested reducing the number of bridge piers by considering a new replacement bridge similar to the new Zakim-Bunker Hill Bridge in Boston. Chris Waszczuk responded that affordability would be one criterion that would determine the practicality of all alternatives, including the cable-stayed bridge type that Tom suggested. While these structures are very expensive, nothing at this point in time has been ruled out from consideration.

Tom also inquired as to the status of the Interim Safety Plan, stating that construction funding was proposed for 2002 as noted in the Feasibility Study. Chris responded that the funding had been secured, but that design development has taken longer than initially expected. The project is expected to be bid next year (2004) with construction beginning in the spring of 2005. Marlon Frink inquired as to the status of the ITS/Incident Management Plan for the Little Bay Bridges. Chris Waszczuk responded a project to install permanent and variable message boards was recently advertised. The Incident Management Plan should be up and running later this year.

Chris Waszczuk then resumed the presentation by referring to a number of slides that described the phases and schedule of the study. Project development usually proceeds from the planning stage, with input from the RPCs, through the MPO process, to include projects in the State's 10-Year Transportation Improvement Program. Conceptual design and feasibility studies follow to scope out or identify project development issues. Following the scoping stage, projects advance to a preliminary design and environmental evaluation stage– with the Environmental Impact Statement (EIS) being the highest or most detailed evaluation. The project then advances to Final Design and right-of-way procurement with construction to follow. A study for the Newington-Dover project area was authorized by the state legislature in 1990 and subsequently halted to

allow the completion of the Pease Surface Transportation Master Plan. Following the Master Plan completion, a feasibility study was initiated in 1997 to identify the traffic and safety deficiencies in the area and develop both interim and long-term conceptual improvement plans for further consideration. The project development is currently in the Preliminary Design and Environment Evaluation stage beginning Phase 1 of the five phases of an Environmental Impact Statement. Those phases are:

- Phase 1 – Project Scoping/Data Collection/Issue Identification
- Phase 2 – Conceptual Alternative Development and Screening
- Phase 3 – Preliminary Design/Impact Assessment/DEIS
- Phase 4 – Public Hearing
- Phase 5 – Final EIS

Marlon Frink inquired as to the future planning horizon year. Chris Waszczuk responded 2025. Chris then described the major elements of each phase of the EIS process. Phase 1 includes the collection of data, base mapping, assessing existing conditions, identifying the affected environment and issues of concern, establishing the Purpose and Need, projecting future travel demands, identifying a range of potential alternatives and developing a scoping report. Phase 2 involves refining and evaluating potential alternatives, screening alternatives and developing a constraints matrix, developing a reasonable range of alternatives and a rationale report. Phase 3 – the Draft EIS – includes further refinement and development of reasonable alternatives, the assessing of impacts, identification of a preferred alternative, the identification of mitigation, and the publishing of the Draft EIS. Phase 4 focuses on the joint public hearing which includes the Army Corps of Engineers (ACOE), Federal Highway Administration (FHWA), and NHDOT. Permit applications will also be submitted and the Commissioner's Report and Special Committee Report (of the Governor's Council) will be prepared subsequent to the hearing. Phase 5 involves the Final EIS which includes confirmation of the least environmentally damaging practicable alternative (LEDPA), approval of the mitigation package, and publishing of the FEIS. FHWA's record of decision (ROD) and the ACOE permit decision follows.

Bill O'Donnell interjected that the mitigation package approved by the ACOE would be permit specific (Wetlands) and that other mitigation (i.e. noise mitigation, etc.) would also likely be included as part of the overall project development.

Chris Waszczuk then reviewed the project schedule:

- Phase 1: February 2003 -- December 2003
- Phase 2: January 2004 -- August 2004
- Phase 3: September 2004 -- November 2005
- Phase 4: February 2006 -- Public Hearing
- Phase 5: March 2006 -- December 2006 (It was noted that the slide contained a typographical error (December 2007)
- FHWA Record of Decision: March 2007
- Final Design: March 2007 to October 2011
- Construction: October 2008 to June 2014

Tom Fargo asked if the 5.5 year construction period reflected fiscal or physical constraints. Chris Waszczuk responded that at this time both were constraints but as the project evolved and details became known, construction phasing could allow some time savings and a more compressed construction schedule. Tom suggested that prefabricated modular construction – such as the Zakim-Bunker Hill Bridge – might reduce the construction schedule.

Chris Waszczuk then reviewed the Phase 1 Milestone Targets:

- Notice-of-Intent (Federal Register) – May 7, 2003 (targeted date)
- Scoping Meeting – June 25, 2003
- ACOE Confirms Project Purpose and Need – September 26, 2003
- Scoping Report – December 18, 2003

Anticipated Meetings include ATF meetings tentatively scheduled for July 30 and October 29, 2003, and a public information meeting in November 2003.

Marlon Frink inquired as to the location for the Scoping Meeting and if there was a scoping report available to review. Chris Waszczuk responded that the meeting would be at Newington Town Hall and that there is no report available – the scoping report would follow the meeting and is scheduled to be published in December 2003.

Chris Waszczuk then touched on the public participation process. In addition to the schedule of ATF meetings throughout the course of the study, other outreach efforts would include public information meetings, resource agency meetings, periodic newsletters, and a project web site – www.newington-dover.com. The web site is active and will contain meeting minutes, plans, documents and other relevant project information as the study advances. A contact list will be developed from individuals who subscribe to the site's mailing list and wish to be informed of upcoming information. The site also offers the opportunity for public comment from which a commonly asked questions section will be developed.

At this point in the meeting, Chris Waszczuk solicited comments and questions from the ATF members. Bill O'Donnell confirmed the date, time and location of the Scoping Meeting – 4:00 PM, June 25, 2003 at Newington Town Hall. Marlon Frink requested that appropriate plans be posted at least one week in advance of the meeting at the Town Hall. Chris Waszczuk concurred. Marlon initiated discussion about the study area stopping short of including the Dover tollbooth, and questioned the soundness of not including toll related issues. Chris responded that the toll issues were not part of the study; the Department had conducted a statewide toll study. He emphasized that toll-related issues are very sensitive legislative level issues. The State's revenue loss due to toll elimination suggest an increase of state gasoline taxes to make up for the shortfall, a proposal that the state legislature has been reluctant to pursue. Tying the Newington-Dover project to the toll issues could indefinitely delay or derail the project. Bruce Woodruff stated that implementation of electronic toll collection scheduled for 2004 would help reduce the congestion at the tollbooth. Chris Waszczuk reiterated that we would work through the congestion problem, but would not be conducting another toll study. Bruce Woodruff suggested that Mike O'Malley of the Turnpike Bureau appear at the next ATF meeting to discuss the Turnpike Toll Study and toll related issues. [Agenda Item]

Tom Fargo noted the system constraint of US 4 being two lanes. Jack Newick stated that the cross-section of US 4 and the Scammell Bridge was contentious for the Town of Durham and others and reflected the concerns of many. Chris Cross suggested that the NHDOT discuss area system constraints at the next ATF meeting [Agenda Item]. John Burke asked if the travel demand model would reflect system constraints including Woodbury Avenue. Frank O'Callaghan replied that it would.

Chris Waszczuk then reviewed the project's purpose—to increase transportation efficiency and to reduce safety problems – and the project's need – current capacity constraints, substandard roadway geometry, a 20-year future traffic volume projection of approximately 100,000 vehicles

per day and a substantial number of study area traffic accidents. Jack Newick offered that the need for additional lanes on the bridge is apparent.

Bruce Woodruff emphasized that, based on his Exit 10 experience, the Purpose and Need Statement needs to be simple and strong. It is critical to the project's development. He also noted the following items should be included in the project need: Hilton Park is a destination, which is pedestrian oriented and needs to be connected to the bicycle system; the Turnpike and bridges are just as critical to the movement of freight and commerce as they are to commuter traffic; there is no other viable route; non-motorized traffic – pedestrian and bicyclist accommodations across the Bay and beneath the Turnpike – are also important.

Chris Waszczuk concurred with Bruce with respect to the importance of the Purpose and Need Statement. A well-defined justified purpose and need statement drives the process for alternative consideration, in-depth analysis, and ultimate selection. Chris suggested that members of the ATF review the draft statement, discuss it among themselves via e-mail if desired, and submit comments to him at their earliest convenience. The ATF will discuss the revised draft Purpose and Need Statement at their next meeting with the intent of adopting a final version.

Tom Fargo made reference to the Feasibility Study and stated that the average annual traffic growth rate assumption of 1.8 percent had been exceeded based on the increase of traffic between 1996-2001 (20 percent) that Frank had mentioned earlier. While underscoring the need for the project, he raised the question of model accuracy. Frank responded that the modeling conducted in 1997 was based on the best available information and was an average annual rate projected for 25 years. For example, traffic volume growth between 2000 and 2001 was 0.0%. As part of the current EIS study, the regional travel demand model is being updated based on 2003 traffic volume data and a current survey of seacoast residents on their travel characteristics. Cliff Sinnott added that recent 2000 census and journey-to-work data would also be used in the model's update and calibration to current conditions.
Marlon Frink asked if the ATF could meet more frequently then quarterly. Chris Waszczuk responded that a quarterly schedule was a guideline and that the ATF could meet more frequently on an as needed basis. Chris Cross suggested that, in addition to meeting, the use of e-mail be utilized to assist in sharing information among the ATF members and the Department. The schedule for the next two ATF meetings was confirmed – Wednesday, July 30, 2003, at 6:30 PM in Dover, and Wednesday, October 29, 2003, at 6:30 PM in Newington (in a larger room). Agenda will be mailed two weeks in advance of meeting. ATF meeting notes will be available, and posted on the web site, within 2-3 weeks following a meeting. Contact information on ATF members will be finalized and posted on the web site. E-mail addresses of the committee members will not be included on the project's website. In response to a question from Jim Campbell, it was agreed that ATF members would send comments on the Purpose and Need to Chris Waszczuk. John Burke asked if the Newington-Dover traffic projects would be coordinated with the US 1 project. Chris responded that the same traffic model will be utilized for both projects.

At this point, questions and comments from the public were solicited. Cynthia Copeland requested that the socio-economic study area be expanded to include the municipalities of Wakefield, Brookfield, Middleton and New Durham. While the population in these communities is relatively low, they are the fastest growing towns in the region and town officials are interested in the study. Chris responded that the socio-economic database for these communities is not readily available, as in the other communities. Further discussion with the modeling sub-consultant will be necessary to discuss this dilemma. Cynthia also inquired as to whether there would be an air quality and noise assessment as part of the study. Frank O'Callaghan stated that both air and noise analyses will be conducted.

It was noted that Fred Pearson and Cliff Sinnott were alternate ATF members representing, respectively, the SRPC and the RPC. Chris Waszczuk stated that alternates would fill in/vote in the absence of the designated ATF member. Alternates' attendance is welcomed, as is the public's. Alternates will be listed on the list of ATF members. Bill O'Donnell noted that ex-officio members, such as himself and Chris Waszczuk would not vote. Chris Waszczuk reminded the members that the ATF is an advisory group, not a decision-making body. He also clarified that reaching consensus on various issues is more desirable than voting.

Cliff Sinnott added some historical perspective to the previous discussion on toll issues. To the best of his recollection, the original 1989 legislation that authorized the feasibility study included a study area north from the Portsmouth Traffic Circle to a point beyond the Dover tolls. Subsequent legislation in 1990 reduced the study area from a point, south of the tollbooth to Exit 1 at Pease Boulevard/Gosling Road.
An attendee inquired as to the feasibility of rail alternatives. It was mentioned that potential rail alternatives will be assessed as part of the EIS process; for example, the rail connection to the Pease Tradeport will be considered, as well as passenger service alternatives, if any.

An attendee inquired as to the public availability of e-mails or other correspondence between ATF members. Chris Waszczuk explained that individual e-mails will not be posted on the website; however, a summary of ATF member discussion will be presented at future ATF meetings and noted in the ATF meeting minutes, which will be posted on the website.

Chris Cross concluded the meeting by stating that the communities have provided a group of talented, experienced, interested and committed individuals to the ATF who represent the values of their communities; the ATF will function as a viaduct for input and feedback to their respective constituencies.

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Cross,
Chair of the Advisory Task Force
Marlon Frink
Steven Stancel (for Bruce Woodruff)
Bill O'Donnell
Jack Newick
Sandy Hislop
Maria Stowell
Tom Fargo
Chris Waszczuk
Fred Pearson (Alternate)
Members of the Public (See Attached List)

Date/Time: July 30, 2003, 6:30 p.m.

Project No.: 51425

Place: Dover City Hall

Re: Newington-Dover (11238)
ATF Meeting No. 2

Notes taken by: Peter Walker

At 6:35 Chris Cross, Chair of the Advisory Task Force (ATF), called the meeting to order.

COMMITTEE'S ROLE and RESPONSIBILITIES

After introduction of the ATF members in attendance, Mr. Chris Cross, ATF Chair, reviewed the role of the ATF. He explained that the ATF is a citizens group, which serves as a conduit for local concerns and issues for the Newington-Dover study. The ATF will meet quarterly for the next three (3) years. Mr. Cross acknowledged that the EIS process is a long one, but explained that the process is designed to allow for input and proper study of all of the issues associated with the project. The ATF will alternate meeting sites between Dover and Newington. The Chair encouraged the ATF and members of the public to follow the progress of the project through the project's website (www.newington-dover.com). Throughout the EIS process there will be not only a number of ATF meetings but other public informational meetings and eventually the public process will culminate in a public hearing, which is currently scheduled for February 2006.

Mr. Cross explained the process for setting the agenda for the ATF meetings. About three weeks prior to the ATF's meeting a draft agenda will be circulated to the ATF. The agenda will be finalized approximately two weeks prior to an ATF meeting and will be circulated in a public announcement approximately one week to 10 days prior to the actual meeting. Members of the public who wish to have an item added to the agenda may contact DOT directly or may contact any member of the ATF to suggest the agenda item. The Chair indicated that ATF meetings will typically be scheduled to run for about two (2) hours and will be held in the evening.

any member of the ATF to suggest the agenda item. The Chair indicated that ATF meetings will typically be scheduled to run for about two (2) hours and will be held in the evening.

Mr. Cross asked Chris Waszczuk, NHDOT Project Manager, to add any additional thoughts on the role and responsibilities of the ATF. Chris Waszczuk stressed that the ATF is an important means for public feedback during the planning of the project. He mentioned that in the future, a bullet item for ATF committee feedback/questions/comments will be added to the agenda to solicit input and encourage discussion on type of feedback and comments the ATF has received from the community. Mr. Waszczuk explained that he understood many in attendance would like to know details of the final plan now, but he stressed that the project is still in its very early stages. Data is being gathered and a preliminary study of the area undertaken to support the development of any alternatives.

The Task Force then took up review of their April 30th meeting minutes which had been previously circulated. Tom Fargo moved to adopt the minutes. The motion was seconded and passed on a unanimous vote.

Mr. Cross then solicited questions and comments from the ATF Committee Members. Hearing none, the Chair then turned the meeting to the next agenda item.

PROJECT UPDATE

Environmental

Peter Walker provided an update on the status of environmental studies. He explained that the EIS is currently in its first phase, which involves collecting all published information on environmental resources as well as conducting numerous field investigations. This information will be developed into an analysis of existing conditions in the project area this fall, and will form the basis for impact assessments in a later phase of the EIS.

During this data collection phase, VHB and NHDOT have contacted all of the local, state and federal resource agencies and community organizations that might have an interest in the project. Mr. Walker reported that approximately 90% of the published information regarding resources in the corridor had been obtained and reviewed.

On-going field studies include mapping of wetlands, wildlife habitat, and farmlands in the corridor. Additionally, VHB is working with the University of New Hampshire to develop mapping of the inter-tidal and sub-tidal areas in the vicinity of the Little Bay and General Sullivan Bridges. Mr. Walker briefly reviewed a map depicting habitat resources in the inter-tidal zone. Mr. Walker reported that an early finding of the sub-tidal mapping indicates that the habitat in the vicinity of the bridges is more characteristic of offshore areas than estuarine habitat.

Other resources being investigated include threatened and endangered species. Mr. Walker reported that the State of New Hampshire has mapped three (3) state listed rare plant species including Bulbous Bittercress, Prolific Knotweed, and Small Spikerush as well as one population of a state listed bird species, Henlow's Sparrow. The US Fish and Wildlife Service has indicated that Bald Eagle and New England Cottontail Rabbit may occur in the project study area. Additionally, the New Hampshire Natural Heritage Inventory has mapped two (2) exemplary natural communities on the Pease Tradeport property.

The data collection phase includes looking for areas of potential contamination that might be affected by the project. VHB has consulted with the New Hampshire Department of Environmental Services and the EPA regarding contamination at the former Pease Air Force Base. Mr. Walker also briefly reviewed a map of the aquifers in the vicinity including a relatively high

yield area on Dover Point and the wellhead protection zone on the northwest portion of the study area. Other on-going investigations include inventories of the historic architectural resources and the historic and prehistoric archeological resources in the project area.

Mr. Walker then turned the meeting over to Frank O'Callaghan, VHB Project Manager, for an update on the traffic and engineering aspects of the project.

Traffic

Mr. O'Callaghan reported that the Department of Transportation and the Regional Planning Commissions are currently conducting additional traffic counts. Since June, approximately 46 different data collections have occurred in the study area in order to provide current conditions for the traffic model.

Additionally, the project has conducted a stated preference survey, which will be used to update the travel demand model. Approximately 58,000 flyers were distributed in the project area including the Hampton tollbooths, the Dover tollbooths, and the Rochester tollbooths with the intent to receive 1000 responses. Information on the survey was also available at the City Halls in the project areas and at other locations. Approximately 1,444 responses were received. Data from the survey is currently being reduced with the results expected to be posted on the web by August 15th.

Mr. O'Callaghan reviewed some of the preliminary findings of the survey:

- 3 out of 4 of the respondents were residents of the area
- 75% of the trips started at home
- 60% of the trips ended at a work place
- 13% of the trips were work related
- 4% were for shopping
- 7% were recreational
- 78% of the respondents drove alone
- 2% of the trips were by bus
- 0.5% of the trips were on bicycle
- 0.2% were pedestrian trips

Scoping Meeting Feedback

Mr. O'Callaghan reviewed feedback received from the public and resource agencies at the June 25th Scoping Meeting. Mr. O'Callaghan explained that minutes from the Scoping Meeting are currently posted on the project website.

The following issues were raised during the Scoping Meeting:

1. One participant asked why only the Dover portion of the Scammel Bridge and Bellamy River was included in the study area. The commenter inquired as to why the Durham portion of that area is excluded. Mr. O'Callaghan explained that no work is expected to occur on the Scammel Bridge or the Durham side of the bridge. This area is remote from the area where work is expected to occur under this project.

2. Others asked why the tollbooths and the area north of the tollbooths are not included in the study area. Mr. O'Callaghan explained that a long-range study of the Route 16 Corridor showed that the section of the Spaulding Turnpike north of the tollbooth would remain at a satisfactory level of service even 20 years into the future. This is in contrast to the conditions in the current study area. Mr. O'Callaghan also indicated that the

tollbooth issue is of statewide importance and indicated that further discussion on that subject would occur later in the ATF meeting.

3. Another comment relating to the study area recommended that Woodbury Ave. from Gosling Road to Market Street Extension be included in the current study. Mr. O'Callaghan indicated that the portion of Woodbury Ave. between the Turnpike and Gosling Road is included and that if the traffic analysis indicated a need that further areas of Woodbury Ave. may be included.

4. A representative of the Office of State Planning pointed out that the New Hampshire Fish and Game Department has plans to reconfigure the existing boat ramp at Hilton Park, and encouraged DOT to coordinate with Fish and Game. Mr. O'Callaghan indicated that the project team had met with the Fish and Game Department to review this issue.

5. Many residents inquired about the property impacts associated with the project. Mr. O'Callaghan indicated that the project has not progressed enough to make an accurate assessment of what property impacts might occur. He pointed out that the February 2000 Feasibility Study was very preliminary in nature and that the current study would reevaluate all prudent alternatives in much greater detail.

6. Another common issue regarded notification of project meetings. Mr. O'Callaghan reviewed the process for subscribing to an e-mail notification list. Alternatively, interested parties can leave their name with the ATF at current or future meetings. Mr. O'Callaghan explained that notice of future meetings would be issued 10 days prior to the meeting. He commented that the website seems to be a useful means for providing information about the project. The site has had over 2,600 visits by more than 2,000 different individuals since it was posted at the end of April 2003. The most frequently visited areas of the website include the photos and maps area as well as the summary of project highlights.

7. In response to comments at the April ATF meeting as well as at the Scoping Meeting, Mr. O'Callaghan pointed out the socio-economic study area had been extended to include the four (4) Strafford County communities of New Durham, Brookfield, Middleton, and Wakefield.

8. Other issues discussed included concerns regarding noise from the highway, which will be assessed in the Environmental Impact Statement.

9. The Army Corps of Engineers commented that project mitigation for wetlands impacts could include the removal of historic fill areas in the Little Bay Piscataqua River area.

Conceptual Alternatives

Mr. O'Callaghan reviewed the potential range of alternatives that will be addressed in the Environmental Impact Statement including:

- No Build
- Transportation System Management improvements
- Transportation Demand Management measures
- Upgrade of the corridor
- Combination of the above

With regard to upgrading of the Little Bay Bridges, Mr. O'Callaghan reviewed five (5) conceptual cross sections of potential reconfigurations:

- Widening the existing Little Bay Bridges on both sides of the bridge
- Widening on the east side of the bridge
- Widening on the west side of the bridge
- Constructing an entirely new bridge
- Constructing an entirely new bridge with a multi use path

Mr. O'Callaghan indicated that alternatives that involve widening the existing bridges would need to consider the seismic condition of the study area. He pointed out that the original bridges were not designed to current seismic standards. Also, visibility over the crest on the bridge is limited and will be a consideration with the bridge alternatives.

Mr. O'Callaghan updated the ATF on the status of the regional travel demand model. Work on this model is ongoing at the Regional Planning Commissions and through VHB's subconsultant RSG. Mr. O'Callaghan expects that a calibrated model will be available during the first week of September and that the results of the model will be presented to the ATF at the next meeting scheduled for October 29th.

The meeting was then opened to questions from the ATF on the project update.

ATF DISCUSSION ON PROJECT UPDATE

Marlon Frink inquired as to whether standard lane and shoulder widths are required for federal funding of the project. Bill O'Donnell indicated that the FHWA prefers standard lane configurations but there is a process for approval of lesser configurations. Marlon Frink suggested that the study consider the feasibility of constructing directional lanes to provide 4 lanes to handle the am/pm peak volumes of traffic and 2 lanes for the opposing traffic with the center two lanes reversible. This could potentially minimize the overall impacts and speed construction. He noted that the predominant traffic in the morning is southbound, whereas traffic is predominately northbound in the afternoon. He noted bridges in the New York/New Jersey area where the direction of travel in certain lanes changes depending on traffic conditions. Mr. Frink also suggested that the study address the reuse of the General Sullivan Bridge. After some discussion, Chris Waszczuk and Frank O'Callaghan indicated that both ideas would be considered during the alternatives analysis.

Tom Fargo explained that he has heard some discussion of bridge alternatives, but would like to know when decisions regarding the bridges (such as determination of bridge type) would be made, including the fate of the General Sullivan Bridge. He expressed some concern that decisions would be made behind closed doors. He stated that there are issues with the profile, navigation, and seismic vulnerability, which need to be considered. Chris Waszczuk replied that no decisions regarding the project would be made behind closed doors. He explained the Department has formed the Advisory Task Force explicitly to ensure public involvement in the decision making process. Over the next year, the project will be developing an alternatives analysis that would eventually lead to a preferred alternative. Public Informational meetings and Advisory Task Force meetings will be held at different stages of the project's development to discuss various issues and build consensus and community support. Chris Cross, ATF Chair, reiterated that the project is still in an early phase and that the intent is to have enough time to do a thorough analysis and adequate studies. He noted that if there is enough demand from the public that the project may develop solutions quicker.

Jack Newick commented that he believed that anything less than four (4) lanes in both north and south directions would be a disaster to the seacoast area. He stated that he could not support "a Band-Aid" solution. Chris Waszczuk replied that the project has $100 million programmed for construction and that it is the Department's intent to find a solution that will handle the projected traffic, 20 to 25 years into the future.

PROJECT PURPOSE AND NEED STATEMENT

The discussion then turned to the project Purpose and Need Statement.

Mr. Cross stated that the Purpose and Need Statement has been posted on the web for the past several months. He gave some background on the Purpose and Need Statement indicating that it forms the basis for the evaluation of alternatives and later phases. He then opened the discussion to the ATF Committee. Chris Waszczuk indicated that he had received some comments from ATF and had made several changes accordingly. He suggested that the ATF review the changes made from the original April 25th draft and requested that the ATF adopt the Purpose and Need Statement as amended. He noted that resource agencies would still have an opportunity to comment and possibly make changes to the final Purpose and Need Statement.

Mr. Waszczuk explained that the Purpose and Need would be presented in the Environmental Impact Statement. Any alternative that does not meet the Purpose and Need would not be carried forward for impact analysis.

The ATF reviewed the substantive changes made to the April 25th draft Purpose and Need statement as follows:

1. The project purpose was amended to refer to transportation system management improvement as an option.
2. The term "enhancing" replaced the term "reactivating" in reference to rail service. In response to a question from Tom Fargo, Mr. Waszczuk explained that there is a commuter rail line in the vicinity. Service on the Portland to Boston Rail Corridor could potentially be enhanced should studies show a benefit towards reducing traffic on the Turnpike, but the basic purpose of the project is not directly related to rail service. There was also a discussion of the existing rail lines within the study area. Chris Waszczuk said that those rail corridors would likely be preserved but not necessarily reactivated.
3. Reference to the Spaulding Turnpike as a major artery for freight was added to the project need.
4. A Paragraph referencing the inefficient and circuitous use of the turnpike between residential and commercial/industrial areas was added.
5. A reference to the seismic performance of the Little Bay Bridges was added to the project need.

Following Mr. Waszczuk's summary, the ATF discussed the Purpose and Need Statement.

Tom Fargo commented that a constituent of his had suggested that the Purpose and Need Statement include a reference to the bridges as a gateway. The task force discussed a proposed change to the project purpose that would incorporate this idea. After some discussion the ATF agreed that the appropriate place for this change would be in the first sentence of the project need as follows:

"The Spaulding Turnpike is eastern New Hampshire's major limited access north-south highway, serving as a gateway linking the Seacoast Region with Concord, the eastern portion of the Lakes Region, and the White Mountain."

Steve Stancel suggested that the Purpose and Need Statement be amended to reflect that the project has to minimize environmental, recreational and neighborhood impacts. Chris Waszczuk commented that he had never seen such a reference in a project Purpose and Need statement, presumably because that concept is so much a part of the environmental impact statement. Tom Fargo agreed with Mr. Stancel's comments and requested that the Purpose and Need statement be amended to incorporate the idea that the project will minimize impact to residential areas. The ATF considered tabling adoption of the Purpose and Need Statement in order to allow time to consider the issue. Jack Newick encouraged the ATF to resolve the Purpose and Need issue at the current meeting. He agreed with the idea of adding reference to minimizing property impacts to the project purpose.

Bill O'Donnell suggested the following revision to the project purpose statement, which the ATF eventually adopted:

> *"The purpose of this project is to improve transportation efficiency and reduce safety problems, while minimizing social, economic, and environmental impacts, for an approximate 3.5-mile section of the Spaulding Turnpike extending north from the Gosling Road / Pease Boulevard Interchange (Exit 1) in the Town of Newington, across the Little Bay Bridges, to a point just south of the existing toll facility in the City of Dover."*

With the two changes made, the ATF voted to adopt the Purpose and Need Statement.

TOLL STUDY

Mike O'Malley of New Hampshire DOT's Bureau of Turnpikes briefed the ATF on issues relating to the Dover tolls. Mike explained that in February 2000, the Governor and Council had approved a study of the entire toll system in New Hampshire. The study looked at four main elements including:

- The Merrimack Tolls
- The Circumferential Highway in Nashua and Hudson
- Congestion at the Hampton Tolls
- Elimination of all statewide tolls over a period of 20 years.

Mr. O'Malley explained that tollbooths in New Hampshire raise $64 million per year in revenue. $30 million pays for operation of the highways including maintenance, salt, and equipment. At the Dover tolls, the Turnpike Bureau processes approximately 13 million transactions per year and takes in $4.7 million in revenue.

Mr. O'Malley explained that improvements to the Dover tolls had recently been made, in part to prepare for a planned electronic toll system known as "E-Z Pass." The tollbooths in Dover can currently process between 450 and 600 cars per hour per lane. With the E-Z Pass system the tolls will be able to process as many as 1,200 cars per hour per lane. Mr. O'Malley reported that the Department of Transportation expects to have E-Z Pass at the Dover tollbooth to be in place by the end of 2004. There are no further improvements planned at the toll facility in the State's Ten-Year Transportation Improvement Plan. Mr. O'Malley also pointed out that no matter what happens to the tolls it will not solve the problems with the Little Bay Bridges. It is the Department's opinion that the Dover toll is adequate and will be adequate for the next 20 years.

The discussion was then opened to questions and comments from the ATF. Tom Fargo commented that he believes the main concern with regard to the tollbooths is the amount of noise generated in that area. Chris Waszczuk explained that as part of the environmental impact statement for the Newington to Dover project noise associated with the highway would be studied and that mitigation in the vicinity of the tolls would occur if warranted.

Marlon Frink expressed the concern that if the bridges and highway are improved then congestion in the corridor will move to the tollbooth. He asked why the tollbooth could not be moved north to the vicinity near an existing cemetery. Chris Waszczuk explained that capacity, safety, and noise concerns leading up to the tollbooths will be studied. Should capacity and safety issues be identified, a project may "spin-off" of the current project. He indicated that a proposal to move the tollbooths and the impact associated with moving the tollbooths would need to be further studied outside the scope of the current project.

Mike O'Malley suggested that moving the tollbooths to the cemetery area may be feasible but with the new expanded 8 lane tollbooths and the E-Z Pass system he believes congestion will not be a problem. Therefore, he does not anticipate a reason to move the tollbooths.

A member of the public suggested that the Dover toll be eliminated and that the 50-cent toll be added at the Rochester tollbooth. Mike O'Malley replied that directive would need to come from either the Governor and Council or through special legislation. Such a project would also need to be added to the Department's 10-year plan.

Kevin Smith, a Dover resident, asked if the tollbooths would need to be further widened in order to accommodate E-Z Pass. He also asked if the E-Z Pass system would work with motorcycles. Mike O'Malley replied that no further widening of the tollbooths would be necessary and that the system would work with motorcycles.

Roy Josselyn, a Dover resident, inquired about toll elimination costs. Mr. O'Malley replied that the toll elimination cost involves the fact that the Dover tolls raised $4.7 million dollars per year that would be lost if they were eliminated. Additionally, there would be construction costs associated with the removal of the Dover tolls. The lost revenue would need to be replaced, presumably through the bonding of money for the highway system.

Chris Waszczuk stressed that tolls are a statewide legislative issue and need to be studied on a statewide basis in order to be fair. Other locales have expressed similar desires to eliminate or move toll plazas. Mr. Waszczuk reminded the audience that the core need for the project is to improve transportation efficiency and safety in vicinity of the Little Bay Bridges. He indicated that inclusion of the Dover tolls issue in the EIS would lead to delay of the project, which would not be good for Dover and Newington.

Marlon Frink commented that members of the public that are concerned about the tollbooths should contact their state representatives and the Governor and Council. Chris Cross, Chair of the ATF, suggested that the toll issues could be raised through the Regional Planning Commission.

Kevin Smith, Dover resident, commented that the Environmental Impact Statement should account for the pollution that is a result of the tolls.

In closing the discussion on tolls, Chris Cross acknowledged that the tolls will remain in place and that the EIS study should move forward acknowledging the constraint posed by the tolls.

QUESTIONS AND COMMENTS (GENERAL PUBLIC)

At 9:00 p.m. Chris Cross, ATF Chair, opened the meeting to other general comments from the public.

Alice Briggs, a resident of Cote Drive in Dover, expressed concern about Pomeroy Cove on the east side of Dover Point. She stated that as a long time resident she has seen the influence of freshwater and sediment on the cove. She pointed out that the cove is important ecologically as well as historically stating that in the past Pomeroy Cove was the landing site for ships. Peter Walker replied that Pomeroy Cove has already been acknowledged as a significant constraint to the project. The consulting team is mapping habitat in the cove. He stated that stormwater quality in the vicinity will undoubtedly become an important issue as the project moves forward and that a good engineering solution to this issue would be sought.

NEXT ATF MEETING

Mr. Cross announced that the next meeting of the ATF would be on October 29th at 6:30 p.m. at the Newington Town Hall. He suggested that any member of the public could contact him to request that an item be added to the meeting agenda. Chris Waszczuk suggested that the bulk of the next meeting agenda would be a summary of the Scoping Report and data collection phases.

At approximately 9:10 p.m. the meeting adjourned.

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE MEETING
DOVER CITY HALL
JULY 30, 2003

Name Barbara & Don Rudolf
Affiliation
Address 5 Pineview Drive Dover, NH 03820

Phone /Email 742-4380 /

Name Elaine & George
Affiliation 7 Pineview Dr
Address Dover NH 03820

Phone /Email 742-5843 /

Name BRUCE W WOODRUFF
Affiliation DOVER PLNG
Address ATF member

Phone /Email /

Name Peter Rose
Affiliation Resident
Address 17 Cote Drive Dover

Phone /Email 749-2335 /

Name Charlene Weed
Affiliation
Address 306 Dover PT Dover N.H

Phone /Email /

Name Sylvia Glover
Affiliation
Address 301 Dover Pt Rd. Dover, N.H.

Phone /Email 742-1449 /

Name Joe Schmaus
Affiliation Resident
Address 2 Pineview Dr

Phone /Email 749-0861 /

Name Steve Stance
Affiliation City of Dover
Address Dover City Hall 288 Central Ave Dover N.H 03820

Phone /Email 603 516 6008

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE MEETING
DOVER CITY HALL
JULY 30, 2003

Name Joyce Mackey
Affiliation Abutter
Address 412 Dover Pt. Rd. Dover, N.H.

Phone /Email 742-6756 /

Name Roy Josselyn
Affiliation
Address 339 Dover Point Rd Dover

Phone /Email /

Name Maria Stowell
Affiliation PDA
Address 360 Corporate Dr Portsmouth

Phone /Email /

Name Leonard Silver
Affiliation
Address 14 Pearson Dr Dover NH. 03820

Phone /Email 742- / 7571

Name Arthur J. DuBois
Affiliation ABUTTOR
Address 283 Dover Point Rd Dover NH

Phone /Email 749-4900 /

Name Michael Gout
Affiliation Foster's
Address 8 Market Square Portsmouth, NH 03801

Phone /Email 431-4888 / mgout@fosters.com

Name Jesse DeConto
Affiliation Ports Herald
Address 111 Maplewood Ave. Ports NH 03801

Phone /Email 610-1151 / jdeconto@seacoastonline.com

Name Howard B Hallett
Affiliation resident
Address 296 Dover Point Rd Dover NH 03820 (603) 743 2255

Phone /Email bjhallett@comcast.net

Name Kevin Smith
Affiliation
Address 10 Homestead Lane
Dover NH

Phone /Email 603 742 0984 / Smithk.nhe comcast.net

Name IAN/CHARLES GARABEDIAN
Affiliation
Address 289 DOVER PT RD
DOVER NH 03820

Phone /Email 749 1667 6 /

Name RONALD HUTCHINS
Affiliation
Address 24 WENTWORTH TERR.
DOVER NH. 03820

Phone /Email 749 1 1535 /

Name Jennifer Michaud
Affiliation
Address 20 Cote Drive
Dover, NH 03820

Phone /Email 7421306 /

Name Maryann Charos
Affiliation Resident
Address 1 Center Dr
Dover NH 03820

Phone /Email 749 1 9173 /

Name Angela & Matt Carter
Affiliation resident
Address 335 Dover Pt
Dover NH 03820
angelamichelle carter @ comcast.net
742 1012

Phone /Email /

Name John & Gloria ANASTAS
Affiliation resident
Address 419A Dover Point Rd
DOVER, NH 03820

Phone /Email 743-3335 /

Name Mark Zengolis
Affiliation Resident
Address 9 Cote Drive
Dover NH 03820

Phone /Email 749-9296 /

Name TIM ROACHE
Affiliation SRPC
Address 2 RIDGE ST
DOVER NH 03820

Phone /Email / TROACHE@STRAFFORD.ORG

Name
Affiliation
Address

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE MEETING
DOVER CITY HALL
JULY 30, 2003

Name BARBARA KIPP
Affiliation resident
Address 24 COTE DRIVE
DOVER NH
Phone /Email /

Name Thomas Stevens
Affiliation Resident
Address 24 Cote Drive
Dover, N.H
Phone /Email Stevens-Kipp@msn.com
742-5783

Name KEVIN Russell
Affiliation NHDOT-Turnpikes
Address
Phone /Email /

Name MICHAEL DUGAS
Affiliation NHDOT - HIGHWAY DESIGN
Address
Phone /Email /

Name HARVEY GOODWIN
Affiliation N.H. D.O.T. - TURNPIKES
Address
Phone /Email /

Name MICHAEL O'MALLEY
Affiliation N.H.D.O.T - TURNPIKES
Address
Phone /Email /

Name DOMINIC RIDOLFI
Affiliation
Address 5 PINEVIEW DR.
DOVER, N.H. 03820
Phone /Email 742-9380

Name Alice Briggs
Affiliation resident
Address 10 Cote Drive
Dover NH
Phone /Email 749-9455 /

Name Tony McManus
Affiliation Dover PB
Address 39 Glenhill Rd
Dover, NH 03820

Phone /Email 749-4464 /

Name Louise Kelley
Affiliation ~~Wentworth~~ (DOT - Dover PT)
Address 31 Wentworth Terrace
DOVER NH 03820

Phone /Email 742-1880 /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

please add us TO your

(Mailing list:) 7/30/03.

Charlene Weed
306 Dover PT Rd
Dover N.H. 03820
603-742-2996.
Have no acces to web site. ⟸

Sylvia Fosco
301 Dover Pt. Rd
Dover, N.H. 0380
Tel: 742-1449

[redacted]
Vanasse Hangen Brustlin, Inc.

Transportation
Land Development
Environmental Services

VHB

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees:
Chris Cross, ATF Chairman
Marlon Frink, ATF Vice Chairman
Jack Newick
Rad Nichols (Alternate)
Maria Stowell
Rick Card
Tom Fargo
Bruce Woodruff
John Burke
Bill O'Donnell, FHWA
Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Jim Colburn, NHDOT
Steve Lawe, RSG
Pete Walker, VHB
Frank O'Callaghan, VHB
Members of the Public
(see attached list)

Date/Time: October 29, 2003

Project No.: 5142500

Place: Newington Town Hall

Re: Newington-Dover (11238)
ATF Meeting No. 3

Notes taken by: Frank O'Callaghan

Chris Cross, ATF Chairman, opened the meeting at 6:40 PM.

COMMITTEE'S ROLE AND RESPONSIBILITIES

Chris welcomed the attendees and reviewed the meeting's agenda. He noted that there was no representative of the US Coast Guard (USCG) at this evening's meeting, but expected USCG representation at the next ATF meeting. He stated that ATF members have been conversing with study area business owners and residents soliciting input for the study, and that ATF meetings are an opportunity for the public to ask questions and offer comments. Chris then introduced Chris Waszczuk, NHDOT Project Manager, who in turn, introduced Frank O'Callaghan and Pete Walker from VHB, consultants to the NHDOT, and Mike Dugas, Marc Laurin and Jim Colburn

from the NHDOT. Steve Lawe, RSG, was also introduced as the subconsultant responsible for assisting the regional planning commission's update of the Seacoast regional travel demand model.

Chris Cross reminded attendees of the project's website (newington-dover.com) and noted that meeting minutes and study information were hosted on the website. He then requested comments on the draft meeting minutes of the previous (July 30, 2003) ATF meeting. Chris Waszczuk suggested that the meeting number (i.e. the second meeting of the ATF) be added to the cover/page 1 and that subsequent ATF meeting minutes note the meeting number. Chris' suggestion was adopted and the July 30, 2003 Meeting Minutes, as revised, were unanimously approved. Chris Cross then solicited comments or concerns from ATF members. There were no comments or concerns.

PURPOSE AND NEED

Chris Cross then addressed the project's Purpose and Need (P&N) Statement. He reminded attendees that the P&N Statement is also on the website, and has been reviewed and revised by the ATF and distributed to all federal and state cooperating agencies for review and comment.

Chris Waszczuk updated the attendees on comments received from the Army Corps of Engineers (ACOE). The ACOE have crafted their own P&N statement which is not unusual. Chris read the ACOE statement – "the basic purpose of the proposed activity is to allow for the safe and efficientf flow of present and future traffic along the Spaulding Turnpike from Pease Gosling Road to the Dover toll facility" which complies with the ACOE's Section 404 guidelines. Chris stated that while the NHDOT would prefer a single P&N statement, however the ACOE customarily crafts their own version to satisfy their regulations which, in the Newington-Dover case, is consistent with the NHDOT/FHWA statement. Bill O'Donnell added that ACOE P&N statements are typically narrow in scope and usually don't consider economic impacts, for example. He stated that in the Newington-Dover case, the ACOE's statement is consistent with the NHDOT/FHWA Purpose and Need Statement and, as such, should not be problematic.

Marlon Frink asked if the ACOE statement would potentially limit the bounds of the study area. Chris responded that the ACOE did not specifically reference the study area map (although the limits are consistent with what is depicted in the study area map). Chris added that the ACOE and others will review and comment on the Scoping Report scheduled to be published for distribution in December 2003.

Chris Waszczuk then distributed a copy of the project Purpose and Need Statement and noted a proposed editorial change under the Need section. He called attention to the first sentence of the third paragraph and stated that while the shoulder width on the Little Bay Bridges is substandard, the existing profile limits driver sight distance, which is not, in and of itself, a geometric deficiency. As such, he proposed changing the first sentence, third paragraph to read as follows:

> *"The Turnpike has a number of existing geometric deficiencies including limited sight distance and substandard shoulder width on the Little Bay Bridges and substandard merge, ….."*

A motion was made and unanimously approved to edit the sentence as proposed. [The amended Purpose and Need Statement will be utilized in the study documents and displaced on the project's website.]

PROJECT UPDATE

Pete Walker initiated the project update by stating that the aerial mapping of the study area was complete and that ground survey checks were in progress and are scheduled to be completed by November 3, 2003. Environmental resource mapping, such as wetlands, wildlife, marine habitat and cultural resources is also complete. He indicated that several of these maps were displayed on the walls. Pete then summarized the issues discussed by the Resource Agencies and public at the recent field meeting in the study area:

- wetland impacts and the need to avoid Pomeroy Cove
- historic structures including the DeRochmont Mansion and the General Sullivan Bridge
- noise impacts with respect to Dover Point residents
- mitigation suggestions including restoration of historic wetland/marine fill and potential water quality improvements to Paul Brook and Pickering Brook that will improve estuarine quality.

Chris Cross asked if the Bloody Point historic district had been acknowledged. Pete replied that the historic district had been noted.

Frank O'Callaghan then briefed the ATF on preliminary bridge investigations by contrasting the Little Bay Bridges with the General Sullivan Bridge. The Little Bay Bridges are characterized by substandard shoulder widths and a 3.5 percent grade which limits driver sight distance to a 60mph design speed (design speed being the maximum safe operating speed governed by the vertical alignment or profile). The 2-lane bridges have minor deterioration along girders and at the expansion joints and the substructure – composed of reinforced concrete – was designed and constructed in 1966 prior to seismic resistance requirements.

Frank then enumerated several factors which would affect the rehabilitation alternatives for the General Sullivan Bridge. The 4 percent grade limits driver sight distance to a 45 mph design speed. The cross-section is limited to 24' of pavement and 2'-11" sidewalks on each side. These geometric characteristics and the continuous truss nature of the structure will preclude the rehabilitation and reuse of the bridge to function as two freeway/turnpike lanes to complement the function and operation of Little Bay Bridges. In addition, the deck, girders and truss members exhibit major deterioration, and there is extensive substructure deterioration. He noted that the piers are composed of unreinforced granite block and mortar, and in conjunction with the low internal redundancy of the truss design and the fatigue associated with the age (1935 construction) of the structure, the General Sullivan Bridge is more vulnerable to a seismic event than the Little Bay Bridges. The General Sullivan Bridge is also historic and subject to lead paint removal and maintenance. Frank noted that the Kimball Chase 1991 inspection and evaluation estimated rehabilitation costs ranging from $8 to $16 million depending on the nature and extent of pier reconstruction or replacement. These 1991 cost estimates would be $12 - $20 million in 2003 dollars, and may underestimate the cost of painting. For example, the I-95 Piscataqua River Bridge was recently re-painted for approximately $11.8 million.

Frank's summary precipitated a brief discussion on rehabilitation alternatives and costs for the General Sullivan Bridge to serve either as a local roadway or as an exclusive transit/high occupancy vehicle facility.

Bruce Woodruff stated the need to accurately represent the costs of rehabilitation or demolition since the bridge cannot be allowed to simply sit and deteriorate. Also, it was questioned whether additional in-depth inspections would be undertaken to better estimate the extent of deterioration and nature of rehabilitation. Chris Waszczuk stated that the previous extensive inspections (conducted in the fall of 1990) are sufficient to identify the nature of the rehabilitation effort required and develop reasonable cost estimates. Should a rehabilitation alternative for the General Sullivan Bridge be pursued, then an additional in-depth inspection will be undertaken prior to the development of contract plans. Marlon questioned that it may prove more cost-effective to rehabilitate the bridge than to remove it. Tom Fargo queried as to how one estimates a value on historic significance. Bill O'Donnell noted Section 4(f) requirements and stated that the State Historic Preservation Office (SHPO) advocates keeping the structure as opposed to the USCG who view the structure as a potential threat to navigation and feel that it should be removed. Chris Waszczuk noted that the structure's design, construction and the crossing location contribute to the bridge being noted by SHPO as historically significant with the second highest historic rating in the state.

Chris also explained that the preservation effort of the General Sullivan Bridge must be feasible and prudent, which will be answered by the study. The issue of prudence is somewhat subjective – what level of investment is prudent in rehabilitating the bridge? Bill O'Donnell added that a transportation reuse of the structure would help justify the investment.

A resident inquired as to the original design life of the Little Bay Bridges. Chris Wazczuk responded that 50 years was typical for a 1966 design assuming normal maintenance. Current designs are typically for 50-75 years. The Little Bay Bridges are major structures, serving an important function and located in a moderate seismic area. The bridges are inspected every two years which, in conjunction with travel demand, determines the nature, extent and schedule of maintenance. The northbound and southbound bridges are separate structures and will require seismic retrofitting based on future evaluation.

Frank O'Callaghan then introduced Steve Lawe from RSG to summarize the travel survey and traffic model update. Steve began by reviewing the purpose of the stated preference survey: to assist in updating the regional travel demand model, to estimate Seacoast residents' sensitivity to different transportation mode alternatives, and to assist in developing recommendations on how to improve transportation in the seacoast area. He explained that the survey format was a series of computer-based dynamic questions whereby respondents "state" their preferences given a series of options, and that answers to a question are input to the next question. The survey was designed to support the understanding of potential transportation options. The survey was administered in June 2003 and included 1,537 respondents, approximately 50 percent higher than the 1,000 target response. The survey was computer-internet based with flyers containing the internet web address distributed at many public (toll booths, local transportation centers, city/town halls) areas and at local businesses and colleges. Steve summarized some of the survey findings: 74 percent of respondents were full time seacoast area residents; travel to/from work (60 percent) and work-related business (13 percent) were the most prevalent trip purposes; 78 percent of travelers drove alone; 19 percent shared a ride; and of those who choose not to use a car, cost, congestion and preference for transit were cited as reasons for not driving. The Rockingham and Stafford regional planning commissions are currently reviewing a draft summary report.

Frank O'Callaghan added that approximately 42 percent (660) of the respondents offered comments that he summarized as follows: 32 percent (214) supported implementation of E-Z Pass or electronic toll collection; 12 percent (80) identified the Hampton Toll area as a problem which Frank noted was prior to the recent one-way toll experiment; 26 percent (169) cited a need to widen the Little Bay Bridges and 5 percent (31) stated a need to accelerate the schedule; 7 percent (43) indicated that alternatives to driving alone must be competitive with respect to travel time, cost, and frequency and convenience of service; 6 percent (40) suggested train service alternatives; and 3 percent (22) stated the need for more bikeways and shoulder areas for bicyclists and pedestrians.

Steve Lawe then summarized the process to update the seacoast regional traffic model, the purpose of which is to estimate how future traffic patterns are impacted by land use and transportation policy alternatives, and to enhance the overall understanding of the transportation planning process. He identified data requirements such as seasonal and year round housing; auto ownership and household size; employment; roadway network characteristics such as functional classification, number of lanes, capacity, speeds, and intersection controls; transit routing and costs; tolls and auto costs; travel patterns, such as trip generation, length of trips, mode choice, and choice of travel route; traffic counts; transit ridership; the 1992 seacoast household survey; and the aforementioned 2003 stated preference survey. Steve touched on the sensitivity of the model with respect to infrastructure improvements and changes in land use, and noted that increases in capacity may attract new vehicle trips and that increases in vehicle cost may decrease vehicle trips. The results or output of the travel demand model include: roadway volumes and delays, transit ridership, shifts in travel patterns and shifts in land use patterns. Chris Cross asked as to when the future travel forecast would be available? Steve responded that following a coordination meeting scheduled for November 3, he expects the future (2025) base case (existing transportation system) travel forecast to be available before November 15, 2003. Chris asked if there were any questions from the ATF or public; there were none.

Frank O'Callaghan then continued the presentation by reminding the ATF that the project team was approaching the completion of Phase I of the 5 Phase Study, and that Phase 1, Project Scoping, established the database and identified the issues against which the quantity and quality of impacts associated with potential transportation improvement alternatives could be measured. He summarized a number of transportation inventories. With respect to traffic volumes, he reviewed seasonal variations, vehicle classification and traffic growth along the Turnpike. Average daily traffic on the Little Bay Bridges has grown from 30,000 vehicles in 1980 at an average annual rate of 4% to approximately 70,800 in 2002. Most recently, annual traffic growth has declined to approximately 1.8 percent (2001-2002). The analysis of 2003 peak hour traffic operating conditions revealed capacity constrained conditions in the AM peak hour extending south from the SB Exit 6 on-ramp to the Woodbury Avenue Exit 3 off-ramp; PM peak hour traffic conditions are capacity constrained NB from the Exit 4N turnaround to the Dover Point Road off-ramp at Exit 6, and SB from the SB on-ramp from the River Road turnaround to the Exit 4N turnaround. A number of geometric deficiencies (e.g. substandard turning radii, acceleration and deceleration lanes, and inadequate weaving distances) were also identified at Exit 2, Exit 4, Exit 5 and at Cote Drive. US 4 at the Scammell Bridge is also capacity constrained during both the AM and PM peak hours.

In response to a question from the public regarding the Exxon-Mobil Quick Mart access to the Turnpike at Nimble Hill Road, Chris Waszczuk replied that the interim safety plan for Exit 4, and scheduled for implementation in 2005, will improve safety, access and traffic operations at the service station location and other Exit 4 and 4N locations.

Frank noted that study area accidents (908) during the 1997-2001 5-year period had significantly increased (58 percent) over the number of accidents (575) that occurred during the previous 5-year period (1992-1996). He further noted that while traffic volume increased at 3% per year during the 1997-2002 period, traffic accidents increased by 11% per year, increasing from 144 in 1997 to 220 in 2001. The location of highest accident frequency is the Little Bay Bridges – 97 accidents (11% of total) in 5-year period, with 28 accidents in 2001.

With respect to transit and commuter bus service, Frank indicated that the current levels of service, routing, operations, ridership and planned service improvement data had been compiled for study area providers. The study team had recently met with or contacted representatives of COAST, Wildcat Transit, C&J and Vermont Transit. He noted that COAST was planning implementation of a new downtown Dover loop service in 2004, and express bus service between Rochester and the Portsmouth Transportation Center in 2006. Wildcat has plans to expand service on all its routes. Both C&J and Vermont Transit provide commuter service to Boston – C&J from Dover, Durham (weekends) and Portsmouth; and Vermont Transit from Portland, through Portsmouth to Boston.

Seven (7) rail corridors were also inventoried: Mainline West, running from Plaistow to Rollinsford, which provides freight and passenger service – that being the Downeaster operating between Boston and Portland with stops in Exeter, Durham and Dover; the East Main Line connecting the Portland Yard with Foss Manufacturing in Hampton; the Portsmouth Branch, connecting the Mainline West with the East Mainline; the Newington Branch which extends from the Portsmouth Yard 3.5 miles parallel to the Piscataqua River; the out of service Pease Spur; the abandoned Sawyer-Dover Branch; and the Conway Branch extending from Rollinsford at the Mainline West north through Ossipee to Conway. The East Mainline, Portsmouth Branch, and Newington Branch are active freight lines with track conditions limiting speeds to 5 mph. The Conway Branch is an active freight line (40 mph) between Rollinsford and Ossipee.

Ten (10) park and ride facilities were also inventoried with respect to location, access, parking supply, transit connections, utilization rates and amenities. The City of Dover has suggested the need for a new site in the vicinity of Exit 9 on the Turnpike, and COAST has suggested the need for a site on NH 125 in Rochester.

Frank offered several findings from the review of the socio-economic analysis of baseline conditions including recent 2000 US Census and Journey to Work Data: 76% of all study area workers work within the 30-community, tri-county study area; the number of Strafford County residents working outside Strafford County increased 20% from 1990-2000; as of 2000, 65% of outbound Strafford County commuters commute to Rockingham County. These findings are consistent with commuting travel patterns which are predominantly (70 percent) SB in the AM peak hour on the Turnpike and NB (65 percent) on the Turnpike during the weekday PM peak hour; they also support the fact that there has been more job creation to the south in Rockingham County (e.g. Pease Tradeport) and that the cost of housing is less expensive to the north in Strafford County in comparison to Rockingham County.

Frank concluded his presentation by enumerating the environmental inventories, such as wetlands, vegetation, hazardous materials and cultural resources which have been completed. He noted that a noise model had been calibrated to assess the potential future impacts of transportation improvement alternatives on study area businesses and residents.

Before proceeding to Miscellaneous Items, Chris Cross inquired as to the Agenda for the Public Information Meeting (PIM) scheduled for Wednesday, November 12, 2003 at 6:30 PM at Dover City Hall. Chris Waszczuk responded that the agenda would be similar to this evening's agenda that summarizes the Scoping Phase findings of the study to date and seeks additional public input. He noted that invitations to the PIM have been sent to all the abutting property owners in the project area and to the NHDOT's mailing list. Chris further noted that the draft Scoping Report is being internally reviewed and is expected to be made available to the public in December. It will also be posted on the project website.

MISCELLANEOUS ITEMS

Chris Waszczuk introduced Jim Colburn from the NHDOT to update the ATF on the Intelligent Transportation Systems (ITS) plan for the study corridor and surrounding region. Jim distributed a summary sheet which identified the incident management initiatives for both the Little Bay Bridges and the I-95 corridor. With respect to the Little Bay Bridges, the NHDOT is deploying 5 permanent and 5 portable remotely activated dynamic message signs (DMS) to advise motorists of incidents that occur on the bridges and allow motorists escape routes prior to becoming trapped or grid-locked on the Turnpike. Permanent sign locations include: SB Turnpike at the Sixth Street Bridge; SB Turnpike at Gerrish Road; EB US 4, prior to NH 108 interchange; NB Turnpike opposite Portsmouth Ford; and NB Woodbury Avenue at the Fox Run Mall. Operational protocols have been established among the NHDOT, DOS and local responders, and will be initiated by the State Police. The plan is scheduled for May 2004 implementation. Jim also mentioned that NHDOT, MDOT and State Police from both states have been meeting to develop a coordinated response to incidents that occur along the I-95 and Spaulding Turnpike corridors. This planning will resolve communication and operational issues and result in a future traffic management plan that also involves local agencies in responding to traffic incidents and regional security issues.

A brief Question and Answer session followed Jim's summary. Rad Nichols commended the plan and suggested the addition of a sign location on I-95 northbound south of Exit 3. Jim responded that the Department's consultant will be conducting additional studies and will review the Exit 3 location. Jack Newick inquired as to the use of radio for highway advisories, similar to Maine. Jim stated that the NHDOT is evaluating such a system. He also noted that NH is participating with ME and VT in developing a standard – one call system – to alert drivers of conditions throughout the region. Both Rad and Tom Fargo suggested the need for SB driver advisory/information prior to Exit 7 (NH 108 interchange) on the Turnpike, and possibly on the EB ramp at the interchange. Jim stated that a portable sign could be used at the EB ramp, if necessary, and stated that the technology will allow evaluation and testing of the incident management plan as well as the public's reaction to the messages. The duration of incidents will influence operations and response plans which may include temporarily shutting down interchange ramps and shifting traffic flows between NB and SB barrels of the Turnpike. Responders to incidents also need to be educated to work as teams to improve efficiency and reduce delays. Bill O'Donnell mentioned that video monitoring might also play a role in reducing response times. Jim noted that the NHDOT is evaluating video monitoring as part of its collaborative effort with the Department of Safety and Public Health as they plan and develop a centralized traffic management center. The discussion ended with Jack Newick stating that the NHDOT had improved their maintenance schedule along the Turnpike by avoiding holiday and other peak travel times.

DRAFT 10-YEAR TRANSPORTATION PLAN UPDATE

Chris Waszczuk distributed the May 17, 2002, Ten Year Transportation Improvement Program, 2003-2012, summary sheet for the Newington-Dover project and the September 5, 2003, Draft Ten Year Transportation Improvement Program, 2005-2014 (which will be finalized in May 2004), summary sheet for the Newington-Dover project for comparison purposes and to identify funding implication changes due to the current draft program. As currently proposed, the draft Ten-Year Plan projects construction funding to be available during the 2010-2012 period, as opposed to the previous plan that projected construction funding during the 2008-2011 period. In addition, the total project cost has been increased from $108 million to $116.6 million, reflecting additional engineering and right-of-way cost estimates. Chris noted that a number of seacoast residents spoke at the recent Governor's Advisory Council on Intermodal Transportation (GACIT) public hearing hosted in Portsmouth to review transportation issues and needs and identified the Newington-Dover project as a high priority for the seacoast. Tom Fargo, as a representative of the Strafford Regional Planning Commission, stated for the record that the Newington-Dover project is the Seacoast MPO's number one priority, and that the Department needs to maintain the original schedule. Chris Waszczuk responded that the project team is reviewing the study schedule to identify elements which could be expedited and a public hearing targeted sooner. If funding is available sooner than expected, the Department desires to be ready to expedite construction. Jack Newick offered the Manchester Airport Access Road project as an example of how projects can be unexpectedly delayed. Tom Fargo stated that the Portsmouth Chamber of Commerce is lobbying NH's congressional delegation for additional funding.

NEAR TERM OPTIONS

Chris Cross initiated discussion on the possibility of funding for near term, interim improvements which would improve safety or increase traffic operational efficiency. Chris Waszczuk mentioned that the Exit 9 park and ride site, which the City of Dover has proposed, could qualify for CMAQ funding which is programmed for $6.5 million in FY-2007. Small (e.g. $100k to $200k) TSM type actions could be funded from betterment funds; the funding for the Interim Safety Improvements at Exit 4 - 4N in Newington is still programmed for FY-2005

In light of the 2006 CMAQ funding for the COAST express bus service, Rad Nichols questioned whether project construction funds could be utilized sooner to fund the express bus service. John Burke suggested that people at PEASE and in Portsmouth are asking that the express service be implemented now to aid commuting. He also inquired as to the availability of transit funding to relieve construction impacts. Chris Waszczuk responded that spin-off projects such as bus service are a possibility, but he will have to check on funding realities. This precipitated a discussion on transit usage of the General Sullivan Bridge in conjunction with HOV use and the related issues of access management of the bridge, local access connections, schedule of rehabilitation, neighborhood impacts from local connectors, and market demand for transit service. Bruce Woodruff and Chris Waszczuk summarized the transits options for the General Sullivan Bridge as: transit/HOV use only; local traffic including transit; and transit/recreation use. Chris stated that the Phase 2 Rationale Report would sort these issues out. Rick Card raised the issue of potential traffic diversion to alternate routes, such as ME 236, assuming that reconstruction of the Little Bay Bridges reduced the capacity of the bridges during construction. A resident also commented that the GSB, if rehabilitated early enough in the schedule could serve as part of the traffic management plan when the Little Bay Bridges are reconstructed. Chris responded that with respect to reconstruction of the Little Bay Bridges, two lanes of traffic in each direction (as in current conditions) would be maintained at all times to limit aggravating congestion, which would minimize the potential for added traffic diversion.

LONG TERM VISION

Chris Cross posed the question, "How much are Newington and Dover willing to 'give up' to accommodate transportation improvements?" Tom Fargo referred to the 2000 Feasibility Study and suggested the need to advance to a conceptual design level to assess impacts and begin to answer Chris' question. Given the hour of the evening (9:30 PM), discussion of a long-term vision was continued to a future ATF meeting. Chris also stated that there would be more information to come on Future Topics, such as channel navigation issues and interim traffic management ideas.

The meeting adjourned with the scheduling of the next two ATF meetings:

- Wednesday, January 28, 2004, 6:30 PM at Dover City Hall
- Wednesday, April 28, 2004, 6:30 PM at Newington Town Hall

In response to Tom Fargo's inquiry, Chris Waszczuk stated that the Scoping Report will be available for distribution in December/January; the draft report is for NHDOT/FHWA review.

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Cross, ATF Chairman, Newington
Sandy Hislop, Newington
Steve Wells, COAST
Brian Mazerski, OSP/Coastal Program
Jack Newick,
Tom Fargo, SRPC
Bruce Woodruff, Dover
Bill O'Donnell, FHWA
Peter Wellenberger, NHF&G
Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Frank O'Callaghan, VHB
Tim Roache, SRPC
Jim Garvin, SHPO
Linda Wilson, SHPO
Members of the Public

Date/Time: January 28, 2004 / 6:30 PM

Project No.: 51425

Place: Dover City Hall

Re: Newington-Dover (11238)
ATF Meeting No. 4

Notes taken by: Frank O'Callaghan

Chris Cross, ATF Chairman, called the meeting to order at 6:30 PM. In his opening remarks, he reminded all in attendance that it was the role and responsibility of the Advisory Task Force (ATF) to provide a conduit for community impact and feedback on the project; the ATF meets quarterly, or as needed. Chris encouraged the public in attendance to share their ideas of improving the Turnpike with the ATF. He stressed the importance of the Spaulding Turnpike to the Seacoast region, and thus, the importance of the current study of Turnpike improvements. Chris then asked the ATF members to introduce themselves. Following the self introductions, Chris encouraged the public to not be bashful in suggesting ideas or asking questions. He made note of the project website, www.newington-dover.com, which hosts a wealth of project related information and is another means of submitting comments on the project.

Chris then asked ATF members if they had any comments on the draft minutes of the October 29, 2003 ATF meeting. There being no comments, a motion was made and unanimously passed to accept the October 29, 2003 ATF meeting minutes.

Chris Waszczuk then updated the ATF on the status of the Scoping Report. He apologized that he was unable to distribute copies this evening to the ATF as previously scheduled. He explained that final calibration of the travel demand model by the RPC and consultants has taken longer

than expected, and that future traffic projections were available just this week. As such, allowing for analysis and documentation, the Scoping Report will be available in February, 2004. Tom Fargo inquired as to the distribution of the report. Chris responded that the copies would be distributed to each ATF member, and that the report would be posted on the project website. He added that copies would also be provided to resource agencies, municipal offices and public libraries.

Frank O'Callaghan then briefly outlined the contents of the Scoping Report including project purpose and need, the range of conceptual alternatives (TSM, TDM and infrastructure upgrade alternatives in addition to the No-Build condition), a summary of resource inventories which may be affected by the project, and study area issues and constraints.

Bill O'Donnell confirmed that distribution of the Scoping Report would include local officials, public libraries and Town/City Halls.

Chris Waszczuk then explained that due to the inclement weather conditions in New York City, Gary Kassof, Bridge Project Administrator, First Coast Guard District, was not available to attend this evening's ATF meeting, as previously scheduled. Chris then referred to correspondence (e-mail) from Gary that would shed light on the USCG's perspective and concerns. The USCG is responsible for oversight of bridges that traverse navigable waters of the US; he made reference to the USCG permit and amendments associated with the Little Bay Bridges, and specifically to Condition 4 of the 1982 amended permit which calls for the removal of the General Sullivan Bridge (GSB) since it was no longer in use. Such removal of bridges – whose use has been discontinued – is general policy given the potential threat to navigation. If the bridge – in this case, the General Sullivan Bridge – is proposed to be used, it is subject to the USCG's bridge permitting and public review process, along with the proposal to rehabilitate or replace the Little Bay Bridges. In this regard, the USCG acknowledges the FHWA as the lead federal agency with primary environmental review responsibility, and has accepted the cooperating agency invitation from the FHWA. In the USCG's opinion, unless the bridges (Little Bay and General Sullivan) are replaced, the vertical clearances (VC) are set. The USCG is also concerned with maintaining the current depth of channel. Gary's correspondence indicated that he would be willing to reschedule his attendance for a future ATF meeting.

Tom Fargo asked if the maintenance of the current vertical clearance was USCG policy or a requirement. Chris Waszczuk responded that if the bridges are rehabilitated, the VC in essence is set. If the bridges are replaced, the VC requirement would be revisited. In Chris' opinion, if the current VC is maintained, the USCG permitting should not be problematic.

Chris Waszczuk initiated a discussion of vertical clearance issues. Bruce Woodruff offered that maintaining the VC may restrict the feasibility of some of the bridge alternatives (e.g. double-decking); Tom Fargo offered that the VC affects the grade and related driver safe stopping sight distance on the bridges. Sandy Hislop stated that the marina business is contingent on maintaining the current VC and that many boats, such as the Thomas Leighton, traverse the channel on a daily basis and can just barely pass under the bridges at high tide. Current boaters are accustomed to the VC. Jack Newick concurred, stating that lowering of the VC would be a major impediment to many, including lobstermen. Chris Waszczuk asked if there was any data available on the type and frequency of boat traffic and their respective clearance requirements. Sandy stated that some data is available and he would collect and submit it. Bruce Woodruff offered that VC issues are important since every foot of clearance could affect the bridge and transportation alternatives vis-à-vis grade and profile.

In the spirit of brainstorming, Chris Cross asked if there was any possibility of relocating marina operations. Sandy responded that the permitting process for a new marina is next to impossible.

He also mentioned that the UNH marine laboratory operates large boats that require the current VC, in addition to a dozen or more boats moored at Adams Point.

Chris Cross asked if the USCG also has concerns about the depth of channel. [According to Gary Kassof's e-mail, the USCG is interested in channel depths and the ability for the channel depth to be self-maintained. It is the USCG's responsibility to ensure that any bridge alternative does not preclude future use of the waterway.] Jack Newick suggested that bedrock was close to the channel's surface. Chris Waszczuk referred to a bridge plan and confirmed that bedrock was located just below the surface. Such conditions would make tunneling (as was suggested at a previous Public Information meeting) very expensive; vertical clearance requirements would make the concept of placing a tunnel on the surface (and thus avoiding the tunneling) infeasible given the depth of structure (25'±).

Chris Cross asked if there were any other thoughts on the General Sullivan Bridge or vertical clearance. Bruce Woodruff asked if the Scoping Report would include cost estimates on the rehabilitation alternatives such as pedestrian/bicycle only, pedestrian/bicycle and transit, and local traffic including transit and pedestrian/bicycle. Chris Waszczuk responded that cost estimates would be included in the Phase 2 Rationale Report, not in the Scoping Report. He stated that updated cost estimates are currently being developed and that the costs appear to be relatively close in comparison of the different uses. This was due in large part to the deteriorated condition of the bridge and the cost of painting. Updated costs will be crucial to the cost-benefit analysis of alternatives. Tom Fargo asked if a no-action (i.e. leave the General Sullivan Bridge in its current condition) alternative was being considered. Chris Waszczuk replied that the project will address some action --either reuse in some fashion or removal. Costs of removal will include disposal.

Chris Cross asked if there were any questions or comments from the public. Brian Mazerski from the New Hampshire Coastal Program stated that a 1-3 foot rise in sea level due to global warming in the next hundred years is projected and would be relevant to the discussion of vertical clearance.

Jim Garvin, State Architectural Historian, representing the State Historic Preservation Office (SHPO), then distributed a handout summarizing the historical significance of the General Sullivan Bridge (GSB). [Handout attached]. He noted the uniqueness of the GSB's design that was a monument to structural design of the era (1935) and which also reflected the form of a celebrated wooden span of 1794 that had stood nearby; construction was the largest public works project in New Hampshire in 1935; the bridge significantly altered travel patterns that restored the Turnpike to its full use; that the federal War Department required the 53-foot vertical clearance (at low tide); and that the Level I historical significance assigned to the bridge merits total preservation *in-situ*. He stated that SHPO will argue for preservation through the environmental review process. He noted that the USCG's permitting process may be different from the customary Section 106 process.

Chris Cross noted that the historic nature of the bridge adds to the uniqueness of the bridge's location, but at the same time, the transportation solution is location specific given the narrowness of the existing crossing. The question is whether we rehabilitate the existing bridge or replace it with a new bridge and its own uniqueness. Bruce Woodruff reiterated the importance of updating cost estimates so that a cost/benefit analysis can be conducted to assist in the decision-making process. Tom Fargo asked if the cost estimates would include maintenance. Chris Waszczuk responded that cost estimates would reflect maintenance/life cycle costs.

Following the discussion on re-use alternatives and cost estimates for the GSB, Chris Cross initiated a discussion of TSM actions that might be feasible in the immediate or short term time

frame to improve traffic flow efficiency or safety in the study area, other than the Interim Safety Plan for Exit 4 in Newington scheduled for 2005 implementation. Frank O'Callaghan then reviewed several ideas that resulted from brainstorming with NHDOT staff, and suggestions from others. The TSM ideas included:

Extending the NB, Exit 6 deceleration lane to the US 4 westbound loop ramp by approximately 400' to prevent PM peak hour exiting traffic from backing up into the NB through traffic. This could be done within the existing shoulder area without affecting the bridge abutments.

Merging the 2-lane SB on-ramp at Exit 6 to a single lane prior to the merge with the main line to improve the AM peak hour main line weaving condition prior to the Little Bay Bridges.

Assuming implementation of the Newington Interim Safety Plan, extending the SB Exit 3 deceleration lane to Woodbury Avenue.

Assuming implementation of the Newington Interim Safety Plan, development of an auxiliary NB lane between the Exit 3 (Woodbury Avenue) on-ramp and the Exit 4 (River Road) off-ramp.

Ramp closures or metering during the PM peak hour condition at Exits 2, 3 and 4 to improve NB traffic flow. Traffic which currently enters the Turnpike at these locations would either be metered or re-routed to Exit 1 via Woodbury Avenue and Gosling Road.

Closure of the entrance to River Road from Woodbury Avenue, in conjunction with closure of the NB Exit 4 on-ramp and construction of a new on-ramp for industrial related traffic in the vicinity of Patterson Lane and the existing Woodbury Avenue/River Road intersection.

Chris Waszczuk stated that these ideas were preliminary in nature and that they needed further assessment and cost analysis to deem level of feasibility. There was general consensus that the Exit 6, NB, extension of the US 4, WB deceleration lane had merit. Bill O'Donnell asked if there was adequate shoulder width adjacent to the bridge abutments, and Frank confirmed that there was.

Tom Fargo and Jack Newick added that there may be a need for better signage at Exit 6, NB since some drivers mistakenly take the Dover Point Road, EB exit, when desiring to connect with either US 4, WB or Boston Harbor Road. This results in U-Turns occurring at the EB Dover Point Road ramp terminal area, a dangerous situation. Signage approaching the NB Exit 6 will be reviewed.

While Bruce Woodruff, Chris Cross and a number of the public also supported the southbound, Exit 6 concept to improve the merge and traffic weaving condition prior to the Little Bay Bridges, Tom Fargo questioned the operational impact on the SB ramp where AM peak hour traffic can queue back to the Spur Road traffic signal. Frank responded that the capacity of the ramp would not be reduced, but that the merge with the mainline Turnpike would be improved.

Other discussion at Exit 6 included the possibility of ramp metering, doubling-up the Exit 6 WB/US 4 ramp, and converting Dover Point Road to 2-way flow over the Turnpike. With respect to ramp metering, the traffic signal at Spur Road, and potentially new signals at the River Road/Exit 4 interchange could be timed to meter on-ramp volumes. Traffic delay and queuing on the local roads will increase. A double loop ramp for WB, US 4 traffic, and the possibility of converting Dover Point Road (over the Turnpike) to two-way traffic will be contingent on the width of the overpass and a traffic operations analysis. These ideas are more long-term

permanent solutions and not relatively low-cost TSM measures. A resident in attendance suggested adding a one-lane Bailey-type bridge to immediately add Turnpike capacity that is needed from Exit 6 (US 4) to I-95. He also questioned when the project's construction was scheduled to begin. Chris Waszczuk responded that the use of a very long (1,500'+) temporary bridge would be very expensive and beyond the scope and funding of a short-term solution. Increasing capacity at the bridges is viewed as more of a permanent and long-term solution. Construction of the project could begin as early as 2008 if funding becomes available sooner than currently programmed for 2010.

With respect to PM peak hour traffic flow, Frank described a suggestion by a State Representative to restrict NB access to the Turnpike at Exits 2, 3 (Woodbury Avenue) and 4 (River Road), and reroute traffic along Woodbury Avenue and Gosling Road to Exit 1. In this manner, Exit 1 would meter the entering traffic and NB traffic flow would be uninterrupted as it approaches the Little Bay Bridges. Frank indicated that preliminary assessment of this idea under existing 2003 PM peak hour traffic conditions resulted in failed traffic operations (LOS 'F') at Exit 1 due to the increase in traffic. He further stated that traffic operations at the Gosling Road/Woodbury Avenue intersection and at the other signalized intersections along Woodbury Avenue, north of Gosling Road, would also be problematic, not to mention the management of peak hour restrictions at Exits 2, 3 and 4, and the anticipated problems associated with traffic attempting to avoid the resulting congestion on Woodbury Avenue and Gosling Road by short-cutting to Exit 1 through the Malls.

Sandy Hislop observed that the closing of the Exit 4/River Road on-ramp was inconsistent with the Newington Interim Safety Plan. Jack Newick concurred stating that re-routing industrial related truck traffic to Exit 1 was a poor idea. There was a general consensus that the idea of re-routing on-ramp traffic from Exits 2, 3 and 4 to Exit 1 was counter-productive. Tom Fargo raised the question of dropping the third NB lane on the Turnpike between Exits 2 and 3 from the inside (median side), which is currently done today, versus dropping the lane on the outside or to the driver's right side. Bill O'Donnell responded that dropping the lane on the inside, or on the driver's left side, is common practice and avoids driver confusion at interchange areas where Exit Only lanes may exist. A member of the public identified the Exit 4, SB weave area between the on-ramp from River Road and Nimble Hill Road as a very dangerous location. Chris Waszczuk responded that the Newington Interim Safety Plan, scheduled for 2005 construction, addressed that very situation. Frank also noted that implementation of the Interim Safety Plan would allow an extension of the SB deceleration lane to Woodbury Avenue. [It was noted that the Exit 4N median turnarounds would remain gated, and available for traffic use only as part of an incident management event.]

Chris Cross then suggested that while the re-routing of NB Exit 4 traffic to Exit 1 may be infeasible, perhaps a re-routing of such traffic to a new on-ramp from Shattuck Way in the vicinity of Patterson Lane to a merge with the Exit 3 on-ramp from Woodbury Avenue would be more practical. It would remove the turbulence of merging traffic at Exit 4 which is very close to the Little Bay Bridges, discourage NH 33 traffic that cuts through Newington via Nimble Hill Road to head north on the Turnpike, and discourage Woodbury Avenue traffic that currently diverts to Shattuck Way/River Road via Old Dover Road and Avery Road to jump ahead of queued or slow moving traffic on the Turnpike. Frank indicated that this concept was being evaluated in conjunction with the development of an auxiliary lane between the Exit 3 on-ramp and the Exit 4 off-ramp. In response to Bruce Woodruff, Chris Cross responded that the new on-ramp concept has not been discussed with area businesses. Chris Waszczuk added that the costs and benefits of this concept, and others, need to be evaluated further; he also noted that right-of-way acquisition vis-à-vis the location of the proposed new ramp could delay implementation and add to the total cost (R.O.W. and construction) which could deem the proposal infeasible from a short-term, TSM implementation perspective.

Frank then briefly described the Park and Ride site at Exit 9 that the City of Dover has suggested as part of the overall TDM-related project alternatives. This 3.4 acre site would be accessed from Indian Brook Drive and abuts residential property (Wilbrod Avenue) on the east and a privately-owned 3 acre undeveloped lot of land to the west. The land is City-owned (originally conceived as a possible fire station location) and is the recommended site of a study of potential park and ride sites by City planning staff. The land is zoned residential which does not preclude the park and ride use. Bruce offered that when the Wilbrod Avenue residential area was developed, residents were made aware of the potential future non-residential uses of this site. Preliminary concepts developed by the City would accommodate over 300 cars. If realized, the site would be serviced by COAST's new 2004 downtown loop service [providing connection to the Downeaster rail service], and probably by COAST's planned express bus service between Rochester and Portsmouth scheduled for 2006. Frank noted that intuitively, the site appears to be feasible; potential demand for such service at this location, and other locations such as Rochester, would be determined when the regional travel demand model is finally calibrated. Frank added that the NW quadrant of the Exit 9 interchange could also be considered a potential park and ride site, to which Tom Fargo replied that the NW quadrant area contains substantial wetlands. Bill O'Donnell asked if COAST currently services the Liberty Mutual complex located to the west of the proposed park and ride site at the Indian Brook Drive/Sixth Street intersection. Steve Wells stated that service is not currently provided, but could be considered. Bill noted that, in general, park and ride sites are more successful when serviced by transit, and since Liberty Mutual is nearby and such a large employer, it may make sense to consider extending service from the Park and Ride site to Liberty Mutual. Steve agreed in principle, but noted that the potential impact of intermediate stops on express bus travel times and schedules would need to be reviewed.

Following the park and ride discussion, Chris Cross initiated a brief discussion on a long-term vision for the study area. He noted that the study area will always be a major transportation corridor, and that while many Seacoast residents are currently calling for immediate action, some fail to recognize the need for taking a long-term perspective. The seacoast region and the Spaulding Turnpike/NH 16 corridor will continue to grow. Given limited financial resources, and the need for a long-term transportation solution to be affordable, what is the priority? Enhanced parkland, a signature bridge, increased mobility, relocation of residents and businesses, sound barriers? Planning must look beyond the affordability and timeframe (design life of improvements) of the project. Jack Newick offered that trying to plan for 50 to 100 years in the future will be extremely problematic and difficult to predict. With respect to the project at hand, anything less than a 4-lane bridge in each direction will be obsolete on opening day. Bruce Woodruff commented that people continue to move north (affordable housing) while major employment growth is to the south of the corridor. Unfortunately, the Tradeport's land development plan does not include housing. Bruce also suggested that bridge alternatives should be able to accommodate future light rail service in 50 or more years. Chris Waszczuk noted that a rail link along an existing rail corridor to Pease may be more feasible vis-à-vis affordability, than a new rail service across the bridges.

Tom Fargo stated that east-west connectivity is important, and that the Turnpike presents a barrier to this linkage. He suggested extending the approaches to the bridges to provide grade separated (Turnpike over local connection) connections, and substituting columns for retaining walls. This would provide open space and urban design options to expand the Hilton Park area. Tim Roache commented potential investment in TDM strategies combined with employer-based programs (such as flexible work hours, ride-sharing and employee transit support) will extend the life of infrastructure improvements. Bill O'Donnell stated that a 20-year design life is traditional planning, but looking out 30-40 years, to the extent possible, makes sense. Chris Cross suggested that the nature and scale of the project, its benefits and costs may need to be considered as phases of a longer term solution. Bill O'Donnell questioned whether or not the state had the

financial resources to return to the Seacoast region in the future, if the current project was viewed as the initial phase of a multi-stage improvement program. Chris Waszczuk concluded the visioning discussion by noting the State's need and responsibility to be prudent with its investments. NHDOT will look closely at preserving the current investment in study area infrastructure (e.g. bridge rehabilitation versus bridge replacement). The recommended improvement plan and program based on 2025 travel demands will not be obsolete on opening day. Such design may accommodate future needs, through right-of-way acquisition and support of TDM alternatives.

Before adjourning the meeting, Frank O'Callaghan very briefly described the long term improvement concepts developed as part of the 2000 Feasibility Study of Spaulding Turnpike Improvements. He briefly described the advantages and disadvantages of each of the nine (9) alternatives, and advised that the purpose of reviewing these preliminary concepts was to stimulate thinking about concepts in general and the manner in which we will evaluate the concepts. Frank also noted that the summary table of alternatives in the Feasibility Report which contained 11 characteristics of alternatives for comparison purposes, has been expanded to approximately 30 characteristics ranging from cost and wetland impacts to property impacts, bridge characteristics, and transportation system efficiency. Following Frank's presentation, Tom Fargo suggested three (3) themes: separate through Turnpike traffic from local traffic; the need and importance of E-W cross Turnpike connectivity for local motorized and non-motorized traffic; and keep concepts and traffic movements as simple as possible. Specific comments included the need for E-W connectivity in Dover by either raising the Turnpike or flying over the Turnpike with a local connector, and maintaining the limited access to the Turnpike. In Newington, Tom noted that local traffic should be served by collector/distributor roadways, and that there should be different expectations for different types of traffic, i.e. local traffic should be expected to operate at slower speeds, and encounter traffic signals or other traffic controls as opposed to through traffic on the Turnpike.

Bruce Woodruff asked if VHB had modeled the feasibility concepts from a traffic and operations perspective. Frank replied that the concepts had been analyzed from a capacity perspective under future 2020 traffic volume conditions, but had not been modeled. Bruce offered that less efficient traffic operation might be an acceptable trade-off with respect to comparing the potential property impacts of the two Dover alternatives. After some discussion on the nature and feasibility of the conceptual improvement alternatives, it was agreed that VHB would model Alternatives 1 and 2 in Dover, and Alternatives 6 and 7 in Newington. These alternatives and modifications to these alternatives would be the subject of an ATF working session scheduled for 6:30 PM, Wednesday, March 31, 2004, at Newington Town Hall.

Before adjourning the meeting, it was also decided to re-invite Gary Kassof, from the USCG to the April 28, 2004 ATF meeting to review the channel navigation and permitting issues.

The meeting adjourned at 10:00 PM.

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Cross, ATF Chairman, RPC
Marlon Frink, ATF Vice Chairman, Newington
Dave Allen, Portsmouth
Bruce Woodruff, Dover
Jack Newick, Dover
Rick Card, Dover Chamber of Commerce
Maria Stowell, PDA
Tom Fargo, SRPC
Cynthia Copeland, SRPC
Sandy Hislop, Newington
Butch Wadleigh, FHWA
Mel Jenkins, Lee
Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Frank O'Callaghan, VHB
Bruce Tasker, VHB
Greg Bakos, VHB
Members of the Public

Date/Time: March 31, 2004 / 6:30 PM

Project No.: 5142500

Place: Newington Town Hall

Re: Newington-Dover (11238)
ATF Meeting No. 5
(Work Session)

Notes taken by: Frank O'Callaghan

Chris Cross, ATF Chairman, called the meeting to order at 6:35 PM. He reviewed the agenda and reminded all present that this evening's meeting was a work session for the ATF and that public input is welcome. Following a project overview by Chris Waszczuk and Frank O'Callaghan, there would be a discussion of concepts developed to date, refinements to those concepts based on input received tonight, and a wrap-up.

Chris then asked if there were any comments on the draft minutes of the January 28, 2004 ATF meeting held at Dover City Hall. Chris Waszczuk noted under the list of attendees that Brian Mazerski represented the Coastal Program of the Office of State Planning, and that Peter Wellenberger represented the NH Department of Fish and Game. He also noted a typographical error on page 6; Frank O'Callaghan noted a similar typographical error on page 2. With these corrections noted, the meeting minutes were unanimously accepted by the ATF, with the abstention of Marlon Frink who was not in attendance at the January 28th meeting.

Prior to initiating the presentation and discussion on conceptual alternatives, Chris Cross asked if there were any questions or comments from the ATF and public. Chris Waszczuk noted that e-mail

correspondence to both Jack Newick and Fred Pearson (ATF alternate) had been undeliverable. Jack noted that he will check out his computer and internet service and will follow-up with Chris Waszczuk. Tom Fargo stated that he would contact Fred Pearson and follow-up with him to resolve the problem. At Marlon's suggestion, Chris Waszczuk reminded those in attendance of the project's website, www.newington-dover.com.

There being no further comments, Frank O'Callaghan initiated the presentation of conceptual alternatives by briefly reviewing the design constraints and requirements that form the context of the study area that extends from north of Exit 1 (Gosling Road) to a point just south of the Dover toll plaza. He noted environmental resources such as coastal and surface wetlands, floodplains, cultural resources, recreational resources such as Hilton Park, marine habitat and wildlife; he also identified issues such as navigational requirements, local connectivity, property impacts, noise, future land development, cost and affordability. These resources and issues frame the context within which conceptual improvement alternatives are being developed to address the safety and mobility needs of both motorized and non-motorized study area travelers. Frank also reviewed roadway design criteria such as design speed, lane and shoulder widths, grades and access control. He noted with respect to the Turnpike that 4 lanes in each direction would be required to serve future (2025) peak hour travel demands and provide a level-of-service 'D' vis-à-vis the quality of traffic flow and traffic operations. As a quality measure of traffic flow, levels-of-service range from 'A' at best to 'F' at worst, with LOS 'C' usually used for design purposes, and LOS 'D' usually deemed acceptable by federal and state agencies when providing for LOS 'C' would result in unacceptable environmental, community, or property impacts and/or would be too costly or unaffordable.

In light of the study area resources and design related issues and criteria, Chris Waszczuk mentioned that the goal of tonight's meeting was to discuss the various conceptual alternatives developed for the bridges and the Turnpike, and to eliminate some of the alternatives that are not practical in order to ultimately have a manageable number of alternatives to study and progress further. He then initiated a presentation on the bridge alternatives by first discussing the general characteristics, condition, issues and reuse alternatives associated with the General Sullivan Bridge (GSB). He noted the nine span steel truss nature of the bridge, its length, width, navigational span and vertical clearance, and the fact that the bridge, which was constructed in 1935, has been closed to vehicular traffic since 1984. Chris summarized a number of issues and constraints which affect the reuse potential of the bridge including: bridge geometry, structural capacity and poor physical condition, seismic considerations, historic value, navigation requirements and permitting, and the cost of rehabilitation/reuse alternatives, and long term maintenance cost. Chris noted that the bridge is the second highest rated historical bridge in the state, that the state's Architectural Historian spoke to the history and significance of the structure at the January 28, 2004 ATF meeting, and that SHPO is recommending *in-situ* preservation. He also noted that the USCG, as a matter of policy and as stipulated in the 1982 amended bridge permit for the Little Bay Bridges, requires structures no longer used for transportation purposes to be removed. Should a use for the General Sullivan Bridge be identified, the structure rehabilitated, and maintained in the future, the USCG would re-visit the permitting process for that structure.

Chris then summarized the GSB Reuse Alternatives and associated costs:

- Multi-Use Path $19M
- Pedestrians, Bicyclists and Vehicles (6 ton limit) $20M
- Pedestrians, Bicyclists and Local Traffic (no weight restrictions) $22M
- Replacement Bridge (including removal costs) $36M
- Removal of General Sullivan Bridge $ 5M

(cost of replacing pedestrian/bicycle connection not included)

Tom Fargo asked if the replacement cost ($36M) was reflective of a similar type bridge. Chris confirmed that it was. Bruce Woodruff commented that he had hoped to see an alternative for an exclusive bus way or transit use. He expressed concern that a General Sullivan Bridge proposal for local traffic use may result in local neighborhood opposition, whereas similar local objection may not occur with an exclusive bus way or transit use combined with a recreational use for the bridge. Chris responded that the cost of such an alternative would be akin to the local traffic reuse alternative and would cost approximately $22M. Chris mentioned that the exclusive bus way/transit/recreational use alternative will be specifically noted in future presentations. Chris also mentioned that reuse alternatives would also require future maintenance costs – repainting and structural repairs every 25 years at a cost (2004 dollars) of $4.3M; and deck replacement every 35 years at a cost (2004 dollars) of $1.4M. Tom Fargo suggested that deck deterioration due to deicing and salt should decrease due to the non-motorized nature of the current use and possibly future use. Chris concurred that the affect of salt/de-icing on deterioration would be less, but deterioration would not be eliminated due to the marine environment.

Chris Waszczuk then summarized the characteristics of the existing Little Bay Bridges with respect to year of construction, length, width, navigation and vertical clearance, geometry and cross-section of several widening alternatives which provide – based on the future travel demand projections – 4 lanes of travel in each direction. In the comparison of alternatives – widening to the west, widening to the east, widening to both sides, and a new bridge with a multi-use path – Chris noted the following: all the cost estimates are based on similar length structures; widening to the west will reduce impacts to the bay and Hilton Park, but constructability issues due to the proximity of the General Sullivan Bridge (15'±) may increase costs slightly; widening to the east may require lengthening of the bridge to minimize impacts to the bay and Hilton Park which will add cost, yet be easier to construct; widening to both sides, while increasing the separation distance from the GSB (58'±) introduces some construction inefficiencies which will increase cost, create maintenance of traffic issues, and may still impact the bay and Hilton Park; a new bridge with a multi-use path would entail the removal of the GSB, construction of the new bridge off location while the existing bridges maintain traffic, and removal of the existing Little Bay Bridges following construction of the new bridge. He noted that the new bridge may need to be extended on the Newington approach to allow restoration of some coastal wetlands as suggested by the ACOE. Hilton Park would also be impacted by a new bridge off location.

With respect to rehabilitation and widening alternatives, Chris noted that there were two (2) levels of rehabilitation, and depending upon the potential to replace the existing superstructure with weathering steel (which would save on future maintenance costs), the cost of rehabilitation and widening could range from $46M to $50M.

Bruce Woodruff asked if the rehabilitation and widening cost estimates included seismic retrofitting and if the existing bridge profile would be held. Chris responded that the costs reflect seismic retrofitting, and that the existing profile would be maintained with any of the rehabilitation alternatives. Tom Card asked if the cost estimates were in 2004 dollars. Chris responded that they were 2004 dollars, and noted that there would be an approximate 12% additional cost -on if a multi-use path was incorporated into the design for the Little Bay Bridges.

Chris next described a double-decker concept that would place the northbound travel lanes above the southbound lanes in an attempt to minimize the footprint and subsequent impacts of the bridge and

roadway approaches to the bridge. Double-decking requires a new substructure, a 30-foot vertical separation between roadway surfaces on the bridge, extension of the elevated bridge approaches by approximately 900' in Newington and 1200' in Dover with approximately 650'(±) of retaining wall. The cost of double-decking is approximately $75M, entails a number of constructability and maintenance of traffic issues (i.e. erecting girders and transverse members would not be permitted above traffic on the existing bridge) and may not ultimately reduce the potential impacts on the Dover side of the bridge.

Replacement bridge alternatives include conventional bridges – without a multi-use path – ranging in cost from $55M (steel girder) to $63M (segmental precast concrete box girder), and signature bridges which include a multi-use path. Chris displayed conceptual cross-section and elevation plans for both an open spandrel concrete arch bridge ($87M) and a single cable-stayed bridge ($90M). He noted that the 305 foot elevation above mean sea level at the top of the main pier would be an issue for the FAA vis-à-vis the aviation approach and clearance zone for the runway at the Pease Tradeport.

Chris then referred to a construction cost summary table for all of the combined General Sullivan and Little Bay Bridges alternatives. These combined alternatives were categorized into two (2) major groups: Little Bay Bridge alternatives with the GSB rehabilitated, and Little Bay Bridge (LBB) alternatives with the GSB removed. Assuming that the GSB is rehabilitated, the total estimated bridge costs – for both GSB rehabilitation ($19M) and the rehabilitation or replacement of the LBB – ranged from $65M to $87M; assuming that the GSB is removed, the total estimated bridge costs – for GSB removal ($5M) and the rehabilitation or replacement of the LBB and inclusion of a 16' multi-use path – ranged from $57M to $100M. Chris noted that the Department considers cost to be an important factor in light of the current financial environment, and at this time, desires the alternative that rehabilitates and widens the Little Bay Bridges, which includes a multi-use path and the removal of the General Sullivan Bridge, be included in the further study. This alternative will cost $57M (excluding road construction) and is the lowest cost combined alternative. He stated that while this alternative reflects funding realities, he is seeking comments from the ATF and others. Bruce Woodruff asked if the $100M cost of the cable-stayed bridge could be reduced by relative cost reduction on the roadway approaches. Chris responded that differences in roadway approach costs may or may not be affected by the bridge alternatives, and will be determined as the overall alternatives are further developed. However, the savings or additional cost, as the case may be, is not at this time considered to be significant, given the order-of-magnitude cost difference ($57M - $100M) in range of alternatives. Bruce continued that he believes that one needs to take into account other considerations, such as the future vision of the area, aesthetics, social impacts, and projected capacity needs, in addition to cost, in choosing a preferred alternative for the future. Chris responded that, vision aside, the $57M alternative provides the same general level of safety and capacity improvement that $100M bridge alternative provides. Jack Newick asked if the life span of the $57M and $100M alternatives was the same. Chris responded that they had similar life spans. Frank O'Callaghan suggested that perhaps comparing total costs of alternatives – bridge and roadway – would help in focusing the contrast or difference in scale of cost among some of the alternatives, and that roadway costs would be further refined following input from this evening's meeting. At this point, Chris identified three corrections to the summary cost table: the column heading "General Sullivan Removal/Cost" should read "Little Bay Bridge Removal Cost"; the Replacement – Steel Girder Cost for the Little Bay Bridge Cost (assuming General Sullivan Rehabilitation) should be $55M (instead of $46M), resulting in total cost of $79M (instead of $70M).

Tom Fargo stated he was having a difficult time visualizing/relating to level-of-service 'D' traffic operations and flow, and questioned the need for 4 lanes in each direction... Discussion ensued on density of traffic and traffic speed along similar urbanized freeway type facilities, such as I-95 and I-

93/Central Artery in Boston. Frank O'Callaghan will provide a visualization guide on level-of-service at the next ATF meeting. Tom also questioned how the reported $30M cost estimate for dedicated federal funding for the project affected the bridge alternatives and cost estimates presented tonight. Chris responded that the $30M estimate could provide a comparable "sister-like" structure to the existing Little Bay Bridges. The $30M in dedicated funding would allow the bridge construction to possibly start earlier than the current funding programmed for the project (current draft 10-Year Plan shows construction funding beginning in 2010). The basic rehabilitation and widening alternative cost estimate of $46M accounts for $30M for a sister structure and an additional $16M to rehabilitate, paint, and seismically retrofit the existing Little Bay Bridges.

Marlin Frink asked if construction of any of the alternatives would require shutting down or reducing traffic flows on the existing bridges. Chris responded that maintenance of traffic would be more difficult for some alternatives (i.e. rehabilitation/widening to both sides would necessitate further constriction of the existing narrow width of the Little Bay bridges during the rehabilitation), and that the double-decking alternative would be particularly problematic to maintain traffic on the bridges while erecting members overhead. A critical component for any of the bridge alternatives will be the need to maintain two lanes of traffic in each direction during construction. Traffic flow along the Turnpike would not be able to be shut down. Jack Newick observed that the $57M alternative makes considerable sense. It has the same life span as other alternatives, widening to the west side seemed to present less impact on the bay and Hilton Park, traffic would be maintained during construction, and that one needs to consider the impact of inflation on the cost of alternatives, i.e., costs will only increase and that it may be imprudent to think that the $100M alternative will not escalate over time. Bruce Woodruff noted that the rehabilitation/widening alternatives do not address the current profile of the bridges which limit drivers sight distance and design speed to 60 mph. Chris Waszczuk acknowledged the 60 mph design speed profile, but indicated that the area is posted for 50 mph and there were a number of other factors in addition to profile that affect driver safety on the bridges and bridge approaches including substandard shoulder widths, traffic movements (merging, weaving, entering and exiting, and changing lanes) and driver decision– making in proximity to the bridge approaches that are compounded by the spacing of interchanges, and the volume and speed of vehicles. The rehabilitation and widening alternatives, in conjunction with the roadway improvement alternatives, will improve all of these additional conditions within the context of a 60 mph design speed.

Chris Cross stated that the cost summary of bridge alternatives was useful in identifying the range of alternatives and costs which provide the same level of traffic capacity. Tom Fargo inquired as to the availability of technology to reduce the number of bridge piers and spans. Chris Waszczuk responded that any of the new bridge replacement alternatives including the cable-stayed and concrete arch alternatives could reduce the number of piers in the bay. With respect to the grade-separated, east-west connector in Dover, Tom suggested moving it as close to the water as possible by adding an additional span to the bridge. In this way, Hilton Park could be connected and the park area enhanced due to the opening and proximity to the water. While the waterfront location of the connector will add cost to the bridge alternative, the enhancement to the park is worth considering. Frank O'Callaghan indicated that relocating the east-west connector, as suggested, would be explored.

At this point in the meeting, Chris Waszczuk asked if the ATF would consider dropping one or more of the bridge alternatives. There was no consensus at this time to drop any alternative.

Frank O'Callaghan then described a number of Transportation System Management (TSM) alternatives to improve safety and traffic operations in the short term. These ideas had been briefly identified at the January 28, 2004, ATF meeting:

- Extending the NB Exit 6W deceleration lane to the US4 westbound loop ramp by approximately 400' to prevent PM peak hour exiting traffic from backing up into the NB through lane traffic. This modification can be implemented within the existing shoulder area without affecting the bridge abutment and will improve 2005 LOS from 'D' to 'C'.
- Merging the 2-lane SB on-ramp at Exit 6 to a single lane prior to the merge with the main line, coupled with carrying two through lanes on the Turnpike through the Exit 6 interchange to merge with the single SB on-ramp. Currently the two through lanes merge to a single lane. Frank discussed how current traffic volumes on the mainline (2,500, AM peak hour) warrant the two-lanes; and that the 1,500 vehicles entering on the SB on-ramp could be accommodated in a single lane, and that the single lane merge operation would be an improvement in comparison to existing conditions. He also pointed out that the proposed changes would make it safer and easier for drivers to be in the proper lanes (either outside or inside) when planning to exit at Nimble Hill Road (Exit 4) or Woodbury Avenue (Exit 3). Frank presented a micro-simulation of both the existing and proposed merge conditions. He also pointed out that, while improving the merge condition (2005 LOS 'D'), the TSM action would not eliminate the capacity condition on the Little Bay Bridges.
- Assuming implementation of the Newington Interim Safety Plan (2005 scheduled construction) which eliminates the SB to NB turnaround in the median, the existing SB deceleration lane to Woodbury Avenue could be extended by 600', improving 2005 LOS from 'E' to 'D'.
- Assuming implementation of the Newington Interim Safety Plan, development of a NB auxiliary lane between Exit 3 and Exit 4. Under this concept, the NB on-ramp from Woodbury Avenue would be carried with the two through lanes from Exit 2 to form three lanes, and carried northbound to Exit 4 (River Road) where the auxiliary lane would form a deceleration lane to Exit 4. The on-ramp from River Road would merge with the two through lanes prior to the bridge. Currently, the merge from Woodbury Avenue, coupled with the merge from the SB to NB median U-Turn on the high speed/inside through lane and the weaving of traffic from this median on-ramp to the River Road off-ramp, create congestion during the PM peak hour which causes NB traffic to queue back through the Exit 2 interchange area, and results in some Woodbury Avenue traffic diverting to Shattuck Way/River Road via Patterson Lane in an effort to bypass the queued Turnpike traffic and rejoin the Turnpike via the Exit 4 on-ramp. With the elimination of the merging traffic reversing direction and entering the NB traffic flow from the median, coupled with the elimination of a weaving maneuver, and the extension of the 3rd NB lane from Woodbury Avenue to River Road, the Woodbury Avenue merge of traffic and the exit of traffic at River Road will be significantly improved and delays on queuing of NB through traffic reduced. Frank presented a micro-simulation of traffic operations under both current and proposed conditions. He suggested that in conjunction with development of the auxiliary lane, the access from Woodbury Avenue to Shattuck Way/River Road via the River Road/Patterson Lane connection should be closed to prevent Turnpike traffic from spilling over to River Road only to rejoin the Turnpike at Exit 4. If Woodbury Avenue-to-Spaulding Turnpike traffic continues to divert to Shattuck Way/River Road, following implementation of the proposed TSM improvement, then ramp-metering via a new traffic signal operation at the River Road/Exit 4 on-ramp could be considered to meter on-ramp traffic and discourage non-industrial area generated traffic from diverting to River Road to access the Turnpike.

Frank mentioned that "Stay in Lane" signs on both NB and SB approaches to the bridge should also be maintained and possibly enhanced by the addition of flashing beacons to

reinforce drivers the safety importance of not abruptly changing lanes either on the bridge approaches or on the bridge. The feasibility of using rumble strips vis-à-vis lane lines on the bridge was raised as further reinforcement to stay in one's lane. Chris Waszczuk replied that rumble strips on the bridges were not feasible due to the existing thin pavement depth and would not be considered by the Department.

Frank also stated that ideas suggested by others to close or restrict NB access to the Turnpike at Exit 2, 3, and 4 during the PM peak hour, and to reroute that traffic via Woodbury Avenue and Gosling Road would be problematic and impractical; however, these ideas underscored the level and urgency of the congestion problem, and stimulated the thinking behind the recommended TSM actions in Newington.

Tom Fargo and Jack Newick reminded Frank and the ATF of the need to improve NB signage at Exit 6 to better inform drivers of the 6E and 6W ramps; some drivers wishing to go west on US 4 or connect to Boston Harbor Road and Dover Point Road mistakenly take the first exit ramp (6E) and then reverse direction in proximity to the ramp terminal area on Dover Point Road. The NB signage approaching Exit 6 will be reviewed.

Following discussion of the proposed TSM actions, the ATF unanimously endorsed the implementation of the TSM measures.

Frank then presented a number of long term improvement concepts in both Dover and Newington. In Dover, common to the three alternatives was implementing two-way traffic flow on the Exit 6 overpass and constructing a new NB on-ramp to the Turnpike. Frank compared Alternative 2 with Alternative 1, and noted that Alternative 2 eliminated the double loop ramp operation (NB to WB traffic) by substituting a traffic signal/diamond interchange operation; Alternative 2 had a smaller footprint resulting in less property impacts than Alternative 1; Alternative 2 provided a grade separated connection between east and west side of Hilton Park; traffic signal operations would operate at LOS 'C' or better in the design year (2025); and Alternative 2 ($23M) would cost approximately $2M less than Alternative 1 ($25M). Alternative 2 seemed to address Dover's main concerns, that being the minimizing of property impacts and the maximizing of east-west connectivity. Frank also presented a third concept (Alternative 3), which is similar to Alternative 2, except that it provides a grade separated local connector between Spur Road and Boston Harbor Road; it eliminates the traffic signal at Spur Road/US 4/Boston Harbor Road, restricting all turns to right in/right out; allows free flow of US 4 traffic SB onto the Turnpike in a single lane; and costs approximately $25M. Discussion ensued about the benefits of removing local traffic from the interchange operation, and assuring that all local traffic connections were accounted for. Frank assured Tom Fargo that there was adequate storage for NB exiting ramp traffic given the volume of traffic and traffic signal operation, and Jack Newick raised the need for adequate signage given the changes in local traffic circulation. Following this discussion, the ATF unanimously agreed that Alternative 3 was appealing and more desirable for Exit 6. It was agreed that Alternative 3 should be refined further to minimize impacts to wetlands, and progressed in the EIS. Also, some sentiment existed to evaluate a possible roundabout at Dover Point Road in order to eliminate the eastern most signal and limit impacts further north on Dover Point Road.

Frank next presented three alternatives in Newington. Alternative 6 maintains interchanges at Exit 4 and Exit 3; provides access to the Tradeport; relocates the Pease Railroad spur right-of-way south to run parallel to Patterson Lane; discontinues Exit 2 due to its proximity to the new Exit 3 off and on ramp; provides satisfactory traffic operations; provides a convenient at-grade cross-over location for

incident management; and costs approximately $27M. In comparison to Alternative 7 (single point diamond interchange), Alternative 6 has less visual impact, less property impact/smaller footprints and is less costly (approximately $14M).

Alternative 7 is a single point diamond interchange that combines interchanges at Exit 3 and Exit 4. Similar to Alternative 6, Alternative 7 provides a connection to the Tradeport; discontinues access to the Turnpike from Exit 2 and relocates the Pease spur railroad right-of-way south to run parallel to Patterson Lane. In addition, Alternative 7 provides improved access to Newington's industrial area. The interchange has greater property impacts than Alternative 6, and also presents a significant visual impact due to the nature of the intersection design and the extent of necessary retaining walls. The cost of Alternative 7 is approximately $41M or $14M more than Alternative 6. From a traffic operations perspective, the 2-lane NB on-ramp merge with the mainline may be problematic given the proximity of the bridge and the need to merge the 2-lane on-ramp with three through lanes and then drop a lane prior to the bridge.

Frank next presented Alternative 9, which consolidates both Exit 4 and Exit 3 in the vicinity of Woodbury Avenue. Alternative 9 provides access to the Tradeport, improves access to the industrial area, provides local access to Nimble Hill Road and potential access to future development at the old drive-in site; and discourages the SB free flow access to Woodbury Avenue. Alternative 9 would cost approximately $26M, would not relocate the railroad right-of-way, and would have less visual impact than Alternative 7. Traffic operations would be satisfactory.

Discussion ensued in a comparative manner on all three alternatives. There was consensus by the ATF to drop Alternative 7 from further consideration due to the visual/barrier impact, relative cost and traffic operational concerns. There was also consensus to fashion a melding of Alternative 6 and Alternative 9 into another Alternative. Tom Fargo raised the issue of access to future development land (e.g. the drive-in site) which was evident under Alternative 9 and would require access from the PDA connector roadway (and right-of-way) under Alternative 6. The layout of the SB loop ramp to Woodbury Avenue under Alternative 6 would affect access to the City of Portsmouth's water tank, and as such, would need to be revised. With respect to Alternative 6, Sandy Hislop noted the lack of an industrial area connection perpetuates the presence of truck traffic and noise into Nimble Hill Road and Newington's residential area. While acceptable to the Town of Newington as a temporary condition under the Interim Safety Improvement Plan, the Town of Newington will would not support the industrial connection between River Road and Nimble Hill Road as a permanent solution. Marlin Frink and Chris Cross concurred. Tom Fargo suggested investigating the possibility of relocating the industrial access connector, depicted in Alternative 9, south to either the Exit 2 or the Woodbury Avenue interchange area. This would allow lowering the profile of the Turnpike, as in Alternative 6, but would also provide an industrial connection to Shattuck Way. VHB will investigate/refine Alternative 6 and Alternative 9 based on the feedback from the ATF.

Following discussion on the long term conceptual improvement alternatives, Cynthia Copeland asked if signage on I-95, NB could be reviewed by the NHDOT with the intent of directing drivers destined for Concord to use NH101 to I-93 versus utilizing the Turnpike and US 4. The signage will be reviewed. Cynthia also wanted clarification that under the rehabilitation/widening bridge alternatives, the current profile of the Little Bay Bridges remains. Chris Waszczuk confirmed that she was correct – the existing bridge profile would be maintained under the bridge rehabilitation/ widening alternatives.

The next meeting of the ATF is scheduled for April 28, 2004 in Newington, and a follow-up ATF meeting was scheduled for June 23, 2004 in Dover.

The meeting adjourned at 9:30 PM.

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Cross, ATF Chairman, RPC
Bruce Woodruff, Dover
Sandy Hislop, Newington
Maria Stowell, PDA
Tim Roache, SRPC
Steve Wells, COAST
Peter Wellenberger, NHF&GD
Bill O'Donnell, FHWA
Chris Waszczuk, NHDOT
Jack Newick, Dover
John Burke, Portsmouth
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Gary Kassoff, USCG
Jim Garvin, SHPO
Cynthia Copeland, SRPC
Frank O'Callaghan, VHB
Members of the Public

Date/Time: April 28, 2004

Project No.: 51425

Place: Newington Town Hall

Re: Newington-Dover (11238)
ATF Meeting No. 6

Notes taken by: Frank O'Callaghan

Chris Cross, ATF Chairman, called the meeting to order at 6:40 PM and welcomed all attendees. He explained that the purpose of the Advisory Task Force (ATF) and ATF meetings was to facilitate input from respective ATF constituencies to the project team, and to disseminate information from the project team back to their constituencies. He noted that the study to develop long term improvements to the Spaulding Turnpike was approximately one year old, and that Phase 1, an inventory of existing study area transportation and environmental conditions, was complete and summarized in a Scoping Report. He suggested that, aside from offering input at the ATF meeting, the public was encouraged to contact their respective community groups and to bring ideas or issues of concern to any member of the ATF.

Chris Cross then explained the meeting protocol – following presentation of information, ATF members will be asked for comment or questions, followed by questions and comments from the public. At his request, the ATF members introduced themselves. Following the introductions, the draft meeting minutes of the March 31, 2004 ATF meeting were reviewed. Chris Waszczuk noted two (2) typographical corrections; the draft meeting minutes were then approved, as amended.

Chris noted that Gary Kassoff from the USCG was in attendance and would speak to navigation and bridge permitting issues. Chris stated that Chris Waszczuk and Frank O'Callaghan would discuss bridge and roadway alternatives, respectively. He thanked the public for coming out to the meeting, encouraged them to stay with the project, and emphasized that their input was needed. Chris reviewed the project schedule, noting that construction could begin in 2008 or sooner pending the availability of funding.

Chris Waszczuk then reviewed the meeting's agenda and noted that he hoped that the ATF, following the presentation on bridge and roadway alternatives, could narrow the range of reasonable infrastructure alternatives to carry forward in the study for detailed evaluation. He then introduced Gary Kassoff, Bridge Program Coordinator, for the USCG. Gary noted that the USCG is responsible for permitting the bridges and is a cooperating agency with the FHWA and others in the study of bridge improvements. He reviewed the permitting history of the bridges noting that the original 1930's permit was first modified in 1964 when the first Little Bay Bridge was constructed. The permit modifications incorporated in 1982 when the second barrel of the Little Bay Bridges was constructed, should have required the removal of the General Sullivan Bridge (GSB) since its transportation use had been terminated. The fact that the GSB had not been removed was a violation of federal law. Gary stated that the USCG has a responsibility to ensure that adequate vertical clearance under both the GSB and Little Bay Bridges (LBB) is maintained for navigational purposes. As the project advances, the USCG concerns will focus on addressing navigational needs, and the disposition of the GSB. If the GSB is not reused, the USCG will advocate for its removal due to its potential hazard to navigation. Gary noted that the LBB permit was last amended in 1982.

Peter Wellenberger asked if bicycle use is a viable reuse of the GSB from the USCG perspective. Gary replied that bicycle use is a viable transportation use of the GSB. Tim Roache, SRPC, and Peggy Lamson, Newington Selectwoman, noted that the GSB is designated as part of the state's bicycle route system; Gary stressed that the current permit for the General Sullivan bridge does not sanction its present use as solely a pedestrian and bicycle facility. With regard to navigational needs in the area, Sandy Hislop noted that some boaters from the Great Bay Marina have voiced concern about lowering the existing vertical clearance (VC). Gary responded that the USCG would not allow the existing VC to be reduced unless strong sentiment from the navigational community existed. He also stated that he/the USCG is looking for input on navigational needs, and that he will be reaching out to Sandy and others for their input. Chris Cross asked if the public had any concerns about navigation. There were none.

Chris Cross introduced Jim Garvin from the NH Division of Historical Resources who gave a brief history of the GSB. Jim noted that the GSB is the second highest ranked historic bridge in the state; its unique design is a testament to state-of-the-art design and construction in 1935, and construction of the bridge had a major impact on commerce and use of the Turnpike system. He stated that SHPO would advocate strongly for its preservation. Chris Cross noted that the significance of historic preservation would be taken into consideration with other issues, and suggested that if the bridge cannot be preserved in its current location, perhaps part of the structure could be preserved and relocated as a historic monument. Kate Mallon, a Portsmouth resident, expressed hope that the GSB could be preserved in its current location, noting her emotional attachment to the bridge. A Dover resident noted NHF&GD's proposal to reconstruct a boat ramp (in Hilton Park) in proximity to the GSB, and that the boat ramp project had been suspended pending the recommendations from the Newington-Dover Turnpike Improvement Study. He suggested that perhaps the NHF&GD project could be appended to the bridge project. Chris Waszczuk responded that NHDOT was aware of the boat ramp project and would coordinate with NHF&GD. Project mitigation may include constructing improvements to the boat ramp project. Discussion of the boat ramp project concluded with public comments identifying the need to improve boat launching capabilities, the need for

increased parking, the need for increasing the allowed boat speed in the channel due to the strength of the currents, and the idea of using boat registration fees to fund such projects.

Chris Waszczuk then prefaced his discussion of bridge alternatives by stating his hope that the ATF would be able to narrow the number of alternatives to carry forward for further evaluation based on the preliminary assessment of the conceptual alternatives to date. He reviewed the five (5) phases of the study process: phase 1 – scoping; phase 2 – development and screening of conceptual alternatives, and identification of a reasonable range of alternatives to carry forward for further evaluation; phase 3 – detailed evaluation of alternatives and recommendation of a preferred alternative and mitigation program; phase 4 – a public hearing to discuss the preferred alternative and mitigation program; and phase 5 – responding to comments on the evaluation of alternatives, the preferred alternative and the proposed mitigation program. He noted that the public hearing is tentatively scheduled for October 2005; he also mentioned that there was a project website, www.newington-dover.com, that hosts a wealth of project related information.

Chris then recalled that the ATF provided valuable feedback on the preliminary bridge alternatives at the March 31, 2004 ATF workshop which would be helpful in narrowing down the number of alternatives to carry forward. With respect to the General Sullivan Bridge (GSB), he reviewed general data – such as type of structure (steel truss), length (1,528'), width (24' curb-to-curb), width (275') of main navigation span, vertical clearance (48'-9", within center 100') – and the fact that the bridge was closed to vehicular traffic in 1984. He noted that the bridge is currently used by pedestrians and bicyclists. Chris then reviewed a number of factors which would affect rehabilitating the bridge such as bridge geometry and profile that limited driver sight distance to 45 mph; narrow cross-section; structural deterioration of deck, girders, truss members and joints; substructure deterioration below the water line; lead paint removal, and seismic vulnerability. He noted that the GSB could not be used as part of the traffic management plan for when the Little Bay Bridges are rehabilitated or replaced. Chris summarized the potential reuse and rehabilitation alternatives and associated costs, which ranged from a multi-use path for pedestrians and bicyclists ($19 M) to a pedestrian, bicyclist and transit vehicle only alternative ($22 M). A replacement bridge alternative (including the cost to remove the existing bridge) would cost approximately $36 M. Chris noted that removing the GSB under any alternative would cost approximately $5 M, and would not include the cost of replacing the pedestrian/bicycle connection. He also stated that future maintenance costs would approximate $4.3 M (2004 dollars) every 25 years to repaint and repair the structure, and $1.4 M (2004 dollars) every 35 years for deck replacement.

Chris followed his discussion of the GSB alternatives with a presentation on the Little Bay Bridge alternatives. He reviewed general data, such as length (1,589'), width (28' curb-to-curb, SB and 28'-6" curb-to-curb, NB), width (275') of main navigation span, and vertical clearance (46'-8", within center 100'). He then reviewed the existing bridge cross-section of two 12' lanes in each direction with two 2½' shoulders, and noted that future 2025 travel demand projections require four travel lanes in each direction. Rehabilitation and widening on the west side presents some construction challenges given the proximity of the GSB (approximately 15' between the GSB and widened LBB), but would minimize potential impacts on Hilton Park and the Bay (vicinity of Bloody Point) in comparison to the other alternatives. Widening on the east side would maintain the current distance between bridges, but would have a greater impact to the bay (vicinity of Bloody Point) and Hilton Park. Widening to both sides of the bridge would provide approximately 58' of separation between bridges, would still impact Hilton Park and the Bay shoreline area near Bloody Point, and would result in an inefficient construction method, working in the channel on both sides of the bridge. Traffic management during construction would also be more difficult.

Chris noted that constructing a new bridge, to replace both the LBB and GSB, would permit the current bridge profile to be improved. The existing profile provides a 60 mph design speed, while the posted speed on the bridge is 50 mph. Some have commented that the bridge profile contributes to the occurrence of accidents on the bridge. While the profile may be a contributing factor to accident potential, Chris noted other factors such as narrow/substandard shoulders, the many decision-points and traffic maneuvers on the bridge approaches and traffic congestion due to capacity constraints are prominent in the high accident potential in the area.

New bridge alternatives include double-decking and signature structures, in addition to steel girder and segmental concrete construction. The intent of double-decking was to reduce the footprint of the structure and thus reduce the impacts, particularly to Hilton Park. Chris noted the massive substructure required, the 30' in elevation between lower and upper decks, the necessity to close the lower level to traffic when constructing overhead, the elevated approaches to the bridge and the fact that impacts were similar to other less expensive bridge alternatives. With respect to the signature structures, he stated that both cable stayed and concrete arch bridges could reduce the number of piers in the channel, but both are costly. There is also a potential issue with the elevation of the main tower of the cable-stayed alternative extending into the controlled airspace of the Pease Tradeport.

Chris then reviewed the cost summary matrix of General Sullivan Bridge and Little Bay Bridges Combined Alternatives. The LBB alternatives, which included rehabilitation of the GSB ranged in cost from $68 M to $90 M. The LBB alternatives, which entailed removal of the GSB ranged in cost from $57 M to $100 M. Chris stated that he was hoping that the ATF could narrow down the number of alternatives to possibly three.

Chris Waszczuk then asked the ATF members if they had any questions. Hearing none, Chris Cross opened the questions to the public. A Newington resident asked if the $22 M cost of GSB rehabilitation included total loading for all vehicles. Chris Waszczuk responded that it did, and that reuse of the GSB to bicycles and pedestrians only would cost approximately $19 M.

There being no further questions on the bridge alternatives, Chris Waszczuk turned to Frank O'Callaghan to review the roadway alternatives. Frank began by describing the concept of level of service, noting the qualitative nature of the index of traffic operating conditions as measured by speed, delay and driver freedom to maneuver, comfort and convenience. Levels-of-service (LOS) range from "A" at best to "F" at worst, with LOS "B", "C", "D", and "E" representing the spectrum of conditions between "A" and "F". He noted that LOS "C" is usually used for design purposes, but that federal and state agencies generally accept LOS "D" for design when providing for LOS "C" would result in unacceptable impacts and/or costs. Frank stated the LOS "D" was the design criteria for the Newington-Dover improvement project, and that VHB had prepared a video and simulation of the varying levels-of-service along the Spaulding Turnpike to help ATF members and the public visualize the differences between levels-of-service.

Frank then played a video of traffic flow along the Turnpike at the Exit 6 interchange and the Newington approach to the bridge that depicted the increasing density of NB traffic flow as one progresses from LOS "A" to "E". He noted how traffic flow simulations can be calibrated based on actual traffic volume counts and observations, and then displayed a comparative simulation of traffic flows under LOS "C", "D", and "E" conditions for the Turnpike.

Following the level-of-service presentation, Frank reviewed the three (3) Dover roadway alternatives noting that two-way flow on the Turnpike overpass and the provision of a new NB on-ramp were common to all alternatives. He noted that Alternative 1 provided a two-lane loop ramp for the NB

Turnpike connection to WB US4, and that the at-grade circuitous E-W connection of Hilton Park via Boston Harbor Road, the overpass, and a new roadway on the east side of the Turnpike resulted in a relatively high number of property impacts in comparison to the other alternatives. Frank stated that the E-W connection of Hilton Park for local motorized and non-motorized traffic is important to the City of Dover, and that the City is willing to accept less efficient traffic operation at Exit 6 if property impacts can be reduced. Frank then described Alternative 2, which provides a grade-separated E-W connection of Hilton Park, and provides the NB Turnpike connection to WB US4 via a diamond-type signal controlled intersection – as opposed to the double loop ramp. In comparison to Alternative 1, property impacts are substantially reduced and traffic operation at the four (4) signalized intersections are satisfactory – LOS "C" or better. Alternative 3 modifies Alternative 2 by providing a grade separated connection between Spur Road and Boston Harbor Road. This connection – under the overpass and the SB on-ramp – enables local traffic to connect with Boston Harbor Road and Hilton Park without traversing the interchange area, and allows elimination of the Spur Road traffic signal by restricting turning movements to right-turns only. Previous ATF comments have favored Alternative 3, and suggested moving the Hilton Park grade-separated connection further south, as close to the channel as possible. Frank stated that the preliminary engineering study indicates the feasibility of relocating the connection closer to the channel as suggested, and presented a conceptual plan that modified Alternative 3 to that effect. In this way, an additional span could be added to the bridge – at additional cost – which would provide an opportunity to open the area under the span as additional park area.

Frank then reviewed the Newington roadway alternatives reminding all that Newington representatives had initially indicated community support for Alternatives 6 and 7 of the 2000 Spaulding Turnpike Feasibility Study. Alternative 6 maintains interchanges at both Exits 3 and 4, provides a roadway connector and a right-of-way for a future railroad connection (paralleling Patterson Lane) to the Tradeport at Exit 3, and would provide an ideal at-grade location for a crossover between the NB and SB barrels of the Turnpike for incident management. He noted that Alternative 6 lacked a connection between the Turnpike and the industrial area located between Shattuck Way and the riverfront, and that local traffic from Nimble Hill Road to Woodbury Avenue is required to use the Turnpike (assuming that drivers decline to use the circuitous back route of River Road and Shattuck Way). Frank also noted that the SB off-ramp to Woodbury Avenue at Exit 3 could be relocated slightly to the north (Alternative 6 Revised) to avoid impacting access to the City of Portsmouth's water tower. Alternative 7 combines Exits 3 and 4 at a new single point diamond interchange. This alternative provides roadway connectors to both the Tradeport and the River Road-Shattuck Way industrial area, free-flow connections between the Turnpike and Woodbury Avenue, right-of-way for a future rail connection to the Tradeport that parallels Patterson Lane, and a local connector between Nimble Hill Road and Woodbury Avenue. Local access to future development at the former drive-in site could also be provided. Projected traffic volumes require a double NB on-ramp, which is problematic given the limited distance to merge prior to the bridge. The elevated structure of the Turnpike will present a major visual impact, and the cost of the interchange (based on the 2000 Feasibility Study) will be approximately 50 percent higher than Alternative 6.

Alternative 9 combines Exits 3 and 4 at Exit 3 via a SB two lane loop off ramp and a NB diamond type interchange. The local roadway connection to the Tradeport and the River Road – Shattuck Way industrial area is provided adjacent to the existing railroad right-of-way, which is preserved for a future connection to the Tradeport. A local roadway connects Nimble Hill Road to Exit 3 and Woodbury Avenue. The distance between the two-lane NB on-ramp at Exit 3 and the Little Bay Bridges is adequate for traffic merging prior to the bridge. Access to the former drive-in site could be provided from the local connector. Frank noted that the ATF reviewed Alternatives 6, 7, and 9 at the March 31 workshop meeting, and advised VHB to drop Alternative 7, and to focus on combining the

best elements of Alternatives 6 and 9 into a new concept. To that end, he then described Alternatives 10 and 11.

Alternative 10 is similar to Alternative 9 in that it combines Exits 3 and 4 at Exit 3 for SB traffic, and maintains the local roadway connection to the Tradeport and the River Road – Shattuck Way industrial area adjacent to the existing railroad right-of-way, which is preserved for a future connection to the Tradeport. The local roadway connection from Nimble Hill Road to Exit 3 and Woodbury Avenue is also maintained. However, the SB off-ramp at Exit 3 has been converted from a loop ramp – under Alternative 9, to a diamond configuration, and Alternative 10 also provides NB off- and on-ramps at Exit 4 (River Road). Alternative 11 is similar to Alternative 10, with the exception that the local connector to the industrial area and the preservation of a future rail right-of-way connection to the Tradeport have been relocated south to the Exit 3 interchange/Patterson Lane area. This results in a tri-level interchange area with the rail corridor and industrial access road running under Woodbury Avenue and the Turnpike, and the Woodbury Avenue extension traversing above the Turnpike to intersect the new connecting roadway to Nimble Hill Road.

Following Frank's presentation, discussion ensued. Tim Roache asked if there was adequate NB traffic weaving distance between the Exit 3 on-ramp and the Exit 4 off-ramp under Alternatives 10 and 11. Frank stated that there was sufficient weaving distance of approximately 2,000'. A Homestead Lane resident in Dover, referred to Dover Alternatives 2 and 3 and asked if the traffic signal operations at the Dover Point Road intersection located to the east of the NB off-ramp would result in queuing of WB vehicles and blockage of the Homestead Lane intersection. Frank responded that delays to WB vehicles would be minimal due to the low volume of Dover Point Road traffic entering the traffic stream. As such, potential blockage of Homestead Lane by WB queuing of vehicles is unlikely. A Newington resident asked if the SB to NB median turnaround between Exits 4 and 3 would be eliminated. Yes – as part of the Interim Safety Improvements, scheduled for 2005 construction. A Dover resident raised concern over noise attributed to proximity to the Dover toll plaza. Chris Waszczuk responded that noise mitigation is part of the study and, based on design criteria, monitoring of existing conditions and modeling of future conditions, mitigation may be appropriate. As concept alternatives are developed, mitigation plans will be refined, as required. Another resident stated that existing noise laws, *vis-à-vis* motorcycles and trucks, need to be enforced.

Chris Cross reminded the ATF and public that the Dover toll facility was not part of the study and there is no plan to relocate the toll facility. Comments or questions regarding tolls in general or the Dover toll plaza in particular should be addressed to one's state representatives in Concord. A resident expressed frustration with the lack of enforcement to reduce SB speeding and traffic weaving during the AM peak period; Chris Waszczuk responded that public safety and incident management is a priority for NHDOT, and that NHDOT has conveyed such information to local and state public safety officials. He noted, however, that public safety officials have limited resources, and that the Newington-Dover study area is very compact and creates challenging conditions for traffic enforcement. Kate Mallon, Portsmouth resident, inquired as to the difference between solid double white versus solid double yellow pavement markings. Chris responded that both solid, double lines (either yellow or white) have the same meaning – do not cross. Solid double yellow markings are used between opposing traffic flows; solid double white markings are used between same directional traffic flows. He noted that pavement markings and signage on the Little Bay Bridges and approaches have been improved and conform to the Manual on Uniform Traffic Control Devices. A resident inquired as to the potential noise and air quality issues if the profile of the Turnpike is raised. Chris responded that potential air quality and noise related impacts of alternatives that included raising the profile of the Turnpike would be assessed as part of the study.

Discussion ensued on bridge alternatives. A resident asked, assuming the rehabilitation of the GSB, any thought of utilizing the GSB and Boston Harbor Road for through traffic emanating from US4? Chris Waszczuk responded that the limited width of the GSB, and the need to accommodate pedestrians and bicyclists, would likely prohibit through traffic use. Frank O'Callaghan added it was preferable to separate local traffic from through traffic and avoid the impact of through traffic on the residents of Boston Harbor Road and Dover Point Road. A resident then questioned the expenditure of $22 M for rehabilitation of GSB assuming limited reuse of the bridge. Bruce Woodruff responded that a potential transit reuse would be compatible with pedestrians and bicyclists, and might justify the $22 M rehabilitation cost. Kate Mallon expressed a desire to save the GSB, and suggested incident management as a potential reuse. Cynthia Copeland asked Steve Well's opinion *vis-à-vis* transit use of the GSB if there was an incident on the LBB. Steve responded that COAST would normally use the Turnpike. Bruce Woodruff added that his proposal for transit use is for the future, not as incident management for current conditions. A resident followed up asking if the GSB could be reused as part of a short term traffic solution. Chris Waszczuk responded that the GSB would not be suitable for such use or for traffic control during reconstruction of the LBB primarily due to its narrowness and profile. Chris Cross confirmed that the narrowness of the GSB is problematic for two-way traffic. Related to the Dover side of the channel, a resident asked if the proposed grade separated E-W connection running under the Turnpike connecting Hilton Park would have adequate vertical clearance and turning radii for trucks, noting that large trucks are sometimes used to transport boats to and from the boat ramp. Frank responded in the affirmative.

At this point, Chris Waszczuk noted that the project was approximately at the mid-point of Phase 2 of the study, and that he would propose that the ATF consider the following range of reasonable infrastructure alternatives to carry forward:

- Rehabilitation and widening of Little Bay Bridges with the General Sullivan Bridge rehabilitated.
- Rehabilitation and widening of the Little Bay Bridges with the General Sullivan Bridge removed.
- Replacement of the Little Bay Bridges with the General Sullivan Bridge removed.

With respect to these three (3) bridge alternatives, Chris proposed that the rehabilitation/widening or bridge replacement should occur on the west side of the existing LBB to minimize impacts on the bay/shoreline and on Hilton Park. As a side note, Chris stated that TDM alternatives were also being developed and would be discussed at the next ATF meeting. He further noted that despite the most optimistic projection of TDM impacts, 4-lanes of travel would likely be required per peak direction of flow on a daily basis, i.e. four lanes SB in the morning peak hour, and four lanes NB in the evening peak hour. With respect to roadway alternatives, Chris proposed carrying forward Alternatives 2 and 3 in Dover and Alternatives 10 and 11 in Newington. A resident asked if Alternatives 2 and 3 would require a new bridge over the Turnpike at Exit 6. Chris responded in the affirmative.

Chris Cross suggested that the ATF first discuss the bridge alternatives. With respect to the bridge replacement alternative, style of new bridge is still an open question. Chris Waszczuk noted that a new bridge would afford the opportunity to improve the roadway profile. He reminded all that the existing profile – which would be maintained under the rehabilitation/widening alternatives – meets 60 mph design speed criteria and that the bridge is posted for 50 mph speed limit. The NHDOT is satisfied that the current profile is acceptable, and that other roadway features – such as narrow shoulders and proximity of traffic maneuvers (e.g. traffic weaving and merging) on the bridge approaches will be improved under all alternatives. Chris also noted that the relatively high cost of some of the alternatives could delay construction as adequate funding is procured. Bruce Woodruff observed that a new bridge would convey a more open feeling towards Hilton Park. Chris Waszczuk

concurred, but noted the greater cost. Chris Cross asked if a new bridge would meet current seismic standards. Chris Waszczuk responded in the affirmative, and noted that rehabilitation alternatives would also include seismic retrofits of the existing structure to meet current standards. A resident suggested that the new bridge alternative might allow future rail use of the existing bridge. Jack Newick asked if the life spans were equal for both the rehabilitation alternatives and the new bridge alternative. Chris Waszczuk responded that the life spans were indeed equal. Gary Kassoff, USCG, stated that the GSB must have a current reuse, i.e., it cannot be preserved for a "probable future" use such as rail. A resident opined that if spending a lot of money is a given, then the new bridge is preferable.

Chris Waszczuk stated that cost is a major consideration. He noted that $100 M is currently programmed in the 10-year Transportation Plan for the total project. If $100 M is spent on the bridges, there will be no funds remaining for the roadway improvements. Chris reviewed the Summary Cost matrix of combined bridge alternatives noting the cost implications of the cable-stayed replacement bridge. Bill O'Donnell noted the range of rehabilitation alternative costs and the relatively high cost and minimum additional benefit of replacement bridge alternatives in comparison to the rehabilitation cost alternatives. In response to a question, Chris Waszczuk noted that the length of bridge was assumed to be the same as the existing structure for all cost estimates. In actuality, if the existing bridge were to be lengthened or a proposed replacement structure extended to improve the cross connection between the halves of Hilton Park, the bridge cost would increase accordingly. Bruce Woodruff added that cross connectivity at Hilton Park is important, as is no net loss of parkland. In response to a question, Frank O'Callaghan stated that costs of roadway alternatives are currently being updated and/or developed as the case may be. Steve Wells inquired as to what alternatives would be eliminated by endorsing the three bridge alternatives as proposed. Chris Waszczuk responded that the double decker rehabilitation, and the segmental concrete and steel girder replacement alternatives would be dropped. Steve Wells then moved that the ATF endorse the three (3) bridge alternatives as proposed. Without further discussion, the ATF unanimously endorsed advancing the three bridge alternatives, as proposed.

Chris Cross then initiated discussion of the roadway alternatives. With respect to Dover, Chris proposed advancing Alternatives 2 and 3. There was no further discussion, and the ATF unanimously endorsed Alternatives 2 and 3 to be advanced. Chris then noted the drawbacks to Alternative 6 in Newington – local connectivity and industrial area access. With respect to Alternatives 10 and 11, Steve Wells questioned whether there was adequate merge distance between the NB Exit 4 on-ramp and the LBB. Both Frank O'Callaghan and Mike Dugas responded that design of the on-ramp would allow sufficient distance for the on-ramp traffic to merge with the through traffic. John Burke inquired as to the benefit of the Tradeport connection to Exit 3. Frank responded that as the Tradeport is built out, over 500 peak hour trips from the north might enter and exit the Tradeport via Exit 3. He added that this access will serve to extend the service life of Exit 1, particularly during the weekday PM peak hour, by reducing the heavy volume of left-turns from Pease Boulevard headed NB onto the Turnpike. Maria Stowell requested that the location of the Tradeport connector be realigned to reduce potential impact on developable land abutting Aboretum Drive. Frank O'Callaghan will follow up. The owner of the Exxon service station located at the Nimble Hill Road intersection with the Turnpike expressed his concern that his business will be adversely affected due to the lack of access to the Turnpike under Alternatives 10 and 11. As proposed, site access would be restricted to the local roadway connecting Nimble Hill Road to Woodbury Avenue and Exit 3. Chris Waszczuk responded that provision of an off-ramp from the Turnpike to Nimble Hill Road – and access to the Exxon site – may be difficult to provide, but will be explored. With no further discussion, the ATF unanimously endorsed advancing Alternatives 10 and 11 with consideration of the Nimble Hill Road off-ramp, and the realignment of the Tradeport connector as discussed.

The next meeting of the ATF was tentatively scheduled for June 23, 2004 at Dover City Hall. Chris Cross thanked all in attendance for their interest and participation. He reminded all of the project website, www.newington-dover.com, as a means of staying in touch with the project.

The meeting was adjourned at 9:45 PM.

Transportation
Land Development
Environmental
Services

VHB Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Marlon Frink, Newington
Chris Waszczuk, NHDOT
Bruce Woodruff, Dover
Tom Fargo, SRPC
Jack Newick, Newington
Bill Oldenberg, NHDOT
Bill O'Donnell, FHWA
Steven Wells, COAST
Peter Wellenberger, NHF&G
Marc Laurin, NHDOT
Tim Roache, SRPC
Frank O'Callaghan, VHB
Howard Muise, VHB
Dave Wilcock, VHB
Peter Walker, VHB
Members of the Public

Date/Time: June 23, 2004

Project No.: 51425

Place: Dover City Hall

Re: Newington/Dover (11238)
ATF Meeting No. 7

Notes taken by: Peter Walker

The seventh meeting of the Newington Dover EIS project Advisory Task Force was held on June 23, 2004. The vice chair, Marlon Frink called the meeting to order at 6:30 PM. The chairman of the ATF, Chris Cross had been detained and was not able to attend the beginning of the meeting.

Marlon reviewed the purpose and role of the Advisory Task Force (ATF). The ATF then reviewed the draft minutes from the previous ATF meeting. Marlon called for a motion and vote to accept the meeting minutes and they were accepted unanimously as submitted, with the abstention of Tom Fargo, who was not in attendance at the previous meeting. Marlon then turned the meeting over to Chris Waszczuk to provide an overview of the evening's agenda.

Chris provided an overview of the topics to be discussed, including a review of transportation demand management strategies (TDM) such as rail, bus, high occupancy vehicle (HOV) options, reversible lane options, and park and ride facilities. The meeting will include a review of the project team's recommendations for which alternatives should be carried forward into the DEIS. Finally, preliminary results from the environmental screening phase of the project would be discussed in the form of an "environmental constraints matrix." Chris emphasized the value of input from the ATF and public to the project team.

Frank O'Callaghan listed TDM strategies that are being considered by the project team. The alternatives were developed in coordination with the rail and bus operators in the region and regional planning staff. The project team had met with these agencies to understand the existing public transit infrastructure in the area and to discuss ideas for enhancing and improving transit. The goal of all the TDM alternatives is to reduce the volume of traffic on the Spaulding Turnpike in the project's study area. Once a preliminary list of transit options had been developed, the consulting team met again with representatives of the transit providers and the regional planning staffs to review the analysis of those options. Frank then described the alternatives.

RAIL ALTERNATIVES

Expansion of the Downeaster Service
The first rail alternative examined would involve expanding the Downeaster service by one train set. Currently, the Downeaster makes four round trips per day through the study area. However, only one of these trips coincides with the morning peak hour commuter time. Thus, the existing service is really not providing commuter service. By adding an additional train, it is expected that the service would be more convenient to commuters in the study area. The additional train set would run from Dover station to Boston during the weekday AM peak hour, and return from Boston during the PM peak hour. This alternative would require construction of a new layover facility in Dover in addition to the purchase of a new train set.

Based on a conceptual design, the infrastructure investment for this option is expected to cost between $11.5 and $17 million. The higher figure would allow the service to serve Rochester, rather than terminating in Dover. It was assumed that there will not be a need to double track the existing rail corridor to the Massachusetts state line. If double tracking is required, then the capital investment would increase to about $110-$115 million. Frank noted that these estimates (for all rail and transit alternatives) did not include operational costs.

Regional Commuter Rail Service
A second rail alternative would involve development of a new commuter rail line to carry passengers between Rochester and Portsmouth. This alternative would utilize the existing Conway Branch line south from Rochester and then run along the Main Line West to Dover. From Dover there are two (2) options: continuing along the MLW to Rockingham Junction, and then running east to Portsmouth along the Portsmouth Branch line; or running south from Dover on new right-of-way paralleling the Turnpike and crossing the channel to meet the Newington Branch Line.

Capital cost estimates for these options range from approximately $145 to $170 million. This would involve upgrading the existing rail lines, purchase of new train sets and construction of new train stations in Rochester, Somersworth, Newmarket and Portsmouth. The cost estimate does not include operational costs. Preliminary ridership estimates would result in less than 100 peak hour vehicles being removed from the Turnpike for the Rockingham Junction option, and less than 150 vehicles being removed from the more direct route paralleling the Turnpike.

Commuter/Tourist Service to Conway
A third rail option would involve extension/upgrade of rail service from Dover along the Conway Branch to Rochester and then north to Conway. This option assumes that the NHDOT may restore the 22-mile of missing track in Ossipee, and could be developed to handle freight service and also serve as a connection for tourists visiting the North Country or Boston. A preliminary cost estimate is approximately $40 million.

Frank explained that ridership numbers are very preliminary and that these rail options appear to remove approximately 50 to 150 peak hour vehicle trips from the Turnpike, a relatively low number in relation to the total traffic volume along the Turnpike.

Pease's Spur
A now inactive rail connection exists in Newington which runs from the industrial area on the south and east portion of the study area (the Newington Branch Line), across the Turnpike and then into the Pease Tradeport. The rail right-of-way is at-grade and was active when Pease was used as a military base. Frank pointed out that all of the Newington alternatives maintain a right-of-way corridor for future restoration of this rail service.

Marlon Frink asked Frank to put the estimated rail ridership numbers in the context of the total traffic in the corridor. Frank replied that, based on preliminary estimates, the rail alternatives would remove less than 150 peak hour vehicles from the Turnpike. Currently there's between 3,000 and 4,000 vehicles in the peak direction during the peak hours. That number is expected to increase to 5,000 - 6,000 per hour in the 2025 design year.

BUS ALTERNATIVES

Frank O'Callaghan then described the three (3) bus alternatives that had been developed and preliminarily assessed:

Expand Intercity Service (Rochester-Boston)
C & J Trailways currently operates a coach service between Dover and Boston via Portsmouth. This service could be expanded by adding coaches and extending the service area to Rochester. The cost of this alternative would be approximately $11.5 million in capital investment.

COAST Express Service
Frank explained that COAST plans to operate new express service between Rochester and Portsmouth along the Turnpike. This service is being funded through a CMAQ grant and is scheduled to begin in 2006. Frank explained that the express service could be further enhanced by adding Park and Ride facilities at Exit 9 in Dover and at Exit 12 in Rochester. The cost estimate for these Park and Rides is approximately $5 million. The Park and Rides would allow commuters a place to transfer between their private vehicles and the bus service, as well as support ride sharing and van-pooling.

Enhance Local Bus Service
Wildcat Transit and COAST, specifically COAST Route #2 (Rochester-Portsmouth), Wildcat Route #4 (Dover-Portsmouth) and COAST's Tradeport Trolley operate local bus routes in the study area. These services could be enhanced by adding additional buses to reduce headways and by providing an interconnection/transfer-point at Exit 1 which would allow riders to transfer among the local bus operators. In addition, a new Park and Ride facility could be constructed at the intersection of Route 108 and Route 4 in Durham, which would support the Wildcat #4 route, encourage ride sharing and van-pooling and allow the capture of some traffic that would otherwise go to or from the UNH campus. Capital cost for this enhancement is expected to be about $6.5 million.

There is some overlap among these bus alternatives. Therefore, if they were all bundled and implemented together, the capital cost of the entire package would be about $16 million. Preliminary analysis indicates that ridership for these bus alternatives would be approximately equal to the rail alternatives - at a fraction of the cost. Frank noted that analysis of ridership is on-going.

Peter Wellenberger commented that the newspaper has noted that the Downeaster ridership is down. This prompted Bruce Woodruff to reply that the ridership from Portland to Boston is down, but overall ridership on the Downeaster is up. It would therefore be a mis-statement to generalize that ridership is down. He also noted that COAST is expanding its local service in Dover.

Bruce encouraged the project team to look closely at local transit services. He noted that bus service will be ineffective if buses cannot get through congestion on the bridge. He recommended that consideration be given to utilizing the General Sullivan Bridge as an exclusive bus lane. He noted that moving traffic would be particularly important during construction. Marlon Frink commented that perhaps an exclusive bus lane could be used in combination with an HOV lane. Bruce reiterated that it would be particularly important to allow for an exclusive bus lane during construction. He felt that this could provide strong incentive for a shift in commuting behaviors in the area. Frank O'Callaghan replied that overall maintenance of traffic will be a challenge and that provision of an express bus lane would be an advantage if feasible.

Bruce believes that the issue is directly related to the fate of the General Sullivan Bridge. His understanding is that there is only a $5 million incremental cost to allow the General Sullivan to accommodate bus traffic. Chris Waszczuk explained that the rehabilitation of the General Sullivan Bridge would take at least one year and questioned whether the ATF would recommend that the General Sullivan Bridge be the first element of construction, or whether it is advisable to begin construction on the roadway first. Tom Fargo stated that the fate of the General Sullivan Bridge needs to be determined at the outset. Chris Waszczuk stated that the General Sullivan Bridge requires major rehabilitation, and there is, in fact, an $8 to 10 million incremental cost to accommodate buses.

Steve Wells asked Frank O'Callaghan how the consulting team had arrived at the cost estimates presented for TDM strategies. He pointed out that he believes that the express bus service can be implemented for far less than the $5 million figure quoted earlier by Frank. Frank clarified that the $5 million is actually the cost to design and construct Park and Rides at Exits 9 and 12. It does not include the capital cost and operation of the bus service. The express bus service is already funded and programmed for 2006.

Tom Fargo inquired as to the origin and destination used to predict ridership for the rail options, in particular the Downeaster alternative. Do the ridership figures assume a Dover to Boston trip? Frank confirmed that assumption. Tom stated that he was not surprised by the relatively low ridership estimates for the rail alternatives.

Marlon asked if it would be possible to summarize the alternative analysis in a table format. Chris Waszczuk replied that a matrix is being developed for that purpose and that information would be presented later in the discussion. Marlon asked if the DOT was looking to the ATF to make a recommendation on the alternatives. Chris replied that it was the Department's hope that the ATF would reach consensus this evening on the alternatives to be carried forward.

At this point in the discussion Marlon provided an opportunity for members of the public to ask questions or provide comment. There were no comments from the public attendees at this point.

HIGH OCCUPANCY/ REVERSIBLE LANES

Frank O'Callaghan explained that members of the public and the ATF had inquired about whether High Occupancy Vehicle (HOV) lanes could potentially reduce the scale of the future roadway and bridge infrastructure improvements. Frank explained that two main options for HOV lanes were examined in comparison to a standard 8-lane section. He used a graphic to illustrate the cross-section of each of the options. The first option would be a 2+2+2 lane cross section, with the center two lanes intended as HOV or reversible lanes. The total cross-section of this alternative would be approximately 132 feet. However, the results of the traffic modeling completed to date indicate that a minimum of three lanes in the off-peak direction during summer and fall peak hours would be needed to meet future travel demands. Therefore, this option is not being pursued.

A second HOV concept would involve a 3+1+3 lane cross-section. The center lane would be an HOV or a reversible lane. Frank explained that in order for HOV lanes to be efficient, they must be used by approximately 800 vehicles or more per peak hour. However, the traffic model predicts approximately 300 vehicles per hour would use the HOV lane assuming it would start at the Dover toll plaza and extend to I-95 in Portsmouth. Since potential traffic volumes would not justify this alternative, a second option was explored running from just south of Exit 6 to just north of Exit 1. This alternative would potentially maximize HOV ridership by extending HOV access to traffic from US 4, Dover Point Road, and the Tradeport. Unfortunately, given the compactness of the study area, the relatively short distance between Exits 6 and 1, and the relatively long lengths of roadway necessary to safely accommodate the merging and weaving of traffic to access and egress the HOV lane, this alternative was infeasible from a traffic safety and operation perspective. A third alternative was considered which assumed an HOV lane running from the Dover Toll Plaza to Exit 1. Similar to Alternative 1, the potential ridership estimate falls approximately 40% below the necessary threshold to justify its use.

In light of the infeasibility of HOV use, the 3+1+3 lane concept was tested from a reversible lane use perspective. Under this concept, the reversible lane would be utilized by the peak flow in the peak hour (i.e., southbound in the AM and northbound in the PM) and open to all vehicles. If this reversible lane extended from the Toll Plaza to Exit 1, approximately 1,500 vehicles per peak hour would use the lane, which is enough ridership to justify its use. Frank O'Callaghan explained that this 3+1+3 cross-section would be approximately 152 feet in cross-section due to the shoulders and barriers that would need to be constructed between the reversible lane and the other north and southbound lanes. He noted that this cross-section would actually be wider than the approximately 146 foot cross-section required for a typical 8-lane (4 NB and 4 SB) cross-section. As such, VHB concluded that the 3+1+3 reversible lane concept failed to offer a significant advantage over the traditional 8-lane cross-section -- the 3+1+3 cross section was greater in width, and the 3+1+3 presented additional operational and maintenance costs.

In response to the information presented by Frank, Marlon Frink commented that the larger cross-section associated with a 3+1+3 alternative would also likely increase the cost of the project. Frank pointed out that the 3+1+3 cross-section or any contra-flow option would also have additional operational costs related to plowing, policing and operating the HOV or reversible lane. Frank also pointed out that, because of the number and close spacing of interchanges in the 3.5 mile study area, one of the lanes is primarily functioning as an auxiliary lane for traffic merging from an on-ramp and diverging to an off-ramp, or for weaving traffic between interchanges.

At 7:45 PM, ATF Chair Chris Cross arrived.

Tom Fargo commented that the HOV/Reversible lane concepts do not make sense from a "Yankee thrift" perspective. He questioned why one would put jersey barriers where cars could otherwise travel. Marlon wondered whether it would be possible to operate an HOV/Reversible lane by putting the Jersey barrier on a rail such that it could be moved from one side to the other automatically. Bill O'Donnell pointed out that the HOV lane would require a break down lane, which would be used for disabled motorists and possible police enforcement. Marlon asked whether the bridge design would allow for the future conversion of the planned breakdown lanes to a travel lane. Frank O'Callaghan responded that some flexibility could be designed into the bridge layout.

Bruce Woodruff expressed the opinion that the 8-lane cross-section should be designed so that it could allow creation of an exclusive bus lane at some point in the future. Tom Fargo mentioned that he understood that several HOV lanes elsewhere in the country had recently been discontinued, since they were not adequately used.

Jack Newick had recently traveled in the Washington DC area and mentioned that HOV lanes are used extensively in that urbanized area. Bill O'Donnell suggested that HOV lanes can be controversial since they often are underutilized. He noted that many states investigate HOV use and subsequently drop the idea for any number of traffic operational and safety reasons. Chris Cross asked whether it would be possible to use the center median area of the 8-lane section as a Bus/HOV/Reversible lane at some point in the future. Frank O'Callaghan replied that this would certainly be possible. Bill O'Donnell pointed out that Federal Highway has standards for the design of roadway shoulders, but that some design exceptions are allowed under certain circumstances. Chris Cross suggested that the median cross-section should be designed wide enough to accommodate a future transit or HOV use.

Tim Roache, SRPC, requested that any new bridge allow a 10 to 12-foot lane for bike and pedestrian traffic if the General Sullivan Bridge is removed. Chris Waszczuk and Frank O'Callaghan replied that all bridge alternatives would accommodate pedestrian and bike traffic.

EMPLOYER-BASED TDM

Frank O'Callaghan reviewed employer-based TDM strategies that are possible and which would be assessed including: transit subsidies, ride sharing, vanpools, variable work hours, bike and pedestrian facilities, on-site amenities (daycare, cafeteria) and other measures.

ENVIRONMENTAL CONSTRAINTS MATRIX

Frank O'Callaghan distributed a preliminary environmental constraints matrix to the ATF. He explained that the matrix attempts to summarize the major environmental, construction cost, and traffic related issues associated with each alternative. Bearing in mind that the current project phase is intended to provide an initial screening of alternatives and not a full impacts analysis, the matrix will help interested parties better understand the decision making process and the relative merits of each infrastructure alternative.

Frank reviewed some of the data from the draft matrix. For example, he pointed to the contrast between Dover roadway Alternatives 1 and 2, highlighting that Alternative 1 has greater wetland impact, as well as far greater property impacts and costs. He explained that some of the parameters that will be used and described in an environmental screening in the rationale report are qualitative. The data in the table should be regarded as preliminary and NHDOT and the consulting team are soliciting ATF comments on the contents and format of the matrix.

A general discussion of TDM feasibility followed.

Tom Fargo observed that it is often quite difficult for employees to vary their work hours, given that a working family's schedule is often set by daycare opportunities - that can preclude carpooling. He also pointed out employers typically do not provide lunch service on site and that forces many workers to bring a car to work. Frank O'Callaghan offered that there is some peak spreading at the Pease Tradeport due to the mix of land use -- office, R & D, light industry- and varying work schedules, and that some employers/tenants are now providing on-site cafeterias for employees.

Steve Wells stated that people will use a bus as an option if it runs frequently enough. Often the decision to use public transit is dictated by the type of job that a person holds. He noted that management and sales positions, which frequently need to travel, have a difficult time using public transportation. However, positions with set hours and a set location will typically have a much easier time using public transit. Jack Newick pointed out that there was excellent bus service in the seacoast

area when he was a young man and that over time service has declined. Marlon Frink observed that Americans are in love with their cars. Carpooling is underutilized and is not likely to be more fully utilized until there is a strong economic incentive to do so.

Tim Roache, SRPC, inquired whether the TDM ridership estimates had been analyzed in light of the operational improvements resulting from a wider highway. He suggested that TDM strategies should be analyzed under a constrained traffic-flow condition. Howard Muise, VHB, explained that the TDM alternatives had in fact been analyzed under a 3-lane (LOS E) constrained traffic flow condition. He suggested that if further analysis indicates that a 3-lane cross-section plus a combination of TDM strategies result in a Level-of-Service D traffic operation, then that may be a feasible strategy for the project. Bruce Woodruff stated that the bridge and Turnpike widening to address the 2025 needs should reflect planning for mobility needs beyond 2025. Chris Waszczuk stated that the EPA has requested an analysis of a 3-lane cross-section with TDM strategies. It was the consensus of the ATF that an 8-lane cross-section provides the flexibility to respond to safety and mobility needs beyond 2025 without further widening of the bridges and Turnpike.

ALTERNATIVES TO CARRY FORWARD

Bridge Alternatives

Bridge alternatives have been discussed during previous ATF meetings. However, the project team has concluded that all of the bridge options should limit bridge widening or replacement to the west of the existing Little Bay Bridges (LBB) to reduce impacts to Hilton Park and Bloody Point Cove.

Frank summarized the three main options which are recommended for further consideration:

1.) Westerly widening of the LBB with retention of the General Sullivan. Under this alternative, the General Sullivan Bridge would be rehabilitated to serve pedestrian and bike traffic.
2.) Westerly widening of the LBB with a new multi-use path (16' wide) on the widened bridge. This would involve removal of the General Sullivan Bridge.
3.) Construction of a new bridge to the west of the current Little Bay Bridge. This option could involve construction of a signature structure such as a cable-stayed or a concrete arch bridge. This alternative would also require removal of the General Sullivan Bridge, and provision of a multi-use path (16' wide) on the new bridge.

Roadway Alternatives

Frank O'Callaghan reviewed the roadway alternative that the project team is recommending be carried forward for further analysis in the draft EIS.

Alternatives 2 and 3 in Dover at Exit 6 are similar in many respects – both are characterized by 2-way traffic flow on the Turnpike overpass; a new diamond type interchange in the northbound direction which eliminates the westbound loop ramp to US 4 and includes a new northbound on-ramp; a grade- separated connection under the Turnpike linking the eastside and the westside of Hilton Park; and less property impacts, less wetland impact, and less construction cost than Alternative 1. The only significant difference between Alternatives 2 and 3 is the grade-separated connection under the Turnpike overpass and SB on-ramp from US 4 between Spur Road and Boston Harbor Road that is provided under Alternative 3.

Newington Alternatives 10, 11, and 12 have several common features – a major interchange at Exit 3 to consolidate the majority of the movements presently occurring at Exits 4, 3, and 2(NB); Tradeport roadway connection to Exit 3 and a future grade-separated rail right-of-way connection between the

Tradeport and the Newington Branch line; an industrial roadway connection between Shattuck Way and Exit 3; local roadway connection between Woodbury Avenue and Nimble Hill Road; elimination of the existing SB off-and on-ramps to Nimble Hill Road; and provision of NB off-and on-ramps to River Road. The major difference between Alternatives 10 and 11 is the location of the connector to Shattuck Way and the location of the railroad right-of-way for the future connection to the Tradeport. In Alternative 10, these parallel connections are provided between Exits 3 and 4. Under Alternatives 11, these two grade-separated connections are provided at Exit 3, paralleling Patterson Lane. Alternative 12 modifies Alternative 11 by simplifying the roadway connection from Woodbury Avenue and Exit 3 to the Tradeport, and by modifying the SB on-ramp from Exit 3 to reduce wetland impacts and increase weaving distance between the SB Exit 3 on-ramp and the SB Exit 1 off-ramp. Frank noted that Alternatives 10, 11, and 12 could be modified to provide a SB off-ramp to Nimble Hill Road.

Bill O'Donnell pointed out that Alternative 11 and 12 involve the reconstruction and grade-separated extension of Patterson Lane under the Turnpike. He asked if an at-grade connection to Woodbury Avenue had been considered? Chris Cross replied that Newington feels that the grade-separated connection is an important feature to segregate industrial and truck traffic from the Shattuck Way industrial area without using Woodbury Avenue.

Tom Fargo asked why the connection from Woodbury Avenue to Arboretum Drive under Alternative 12 was placed so far to the west. He suggested that the horizontal curve in that roadway section be tightened to bring the intersection to the south and east. Marlon initiated a discussion of using Fox Run Road as a connection into Pease as an alternative. Chris Cross confirmed that the Newington Planning Board strongly desires a grade separated industrial traffic connection in the general area. Tom Fargo asked whether some of the large radius curves in Alternative 11 and 12 might be tightened up to decrease the footprint of these alternatives. Frank O' Callaghan suggested that the topography, grades and spacing required between ramps and the local roadway intersections determine the curvature and alignment of the connections. He indicated that VHB would review the alignment and design requirements

TSM ALTERNATIVES

TRANSPORTATION SYSTEMS MANAGEMENT (TSM)

Frank O'Callaghan then reviewed four TSM projects that had been previously discussed and endorsed by the ATF. Each of the following is recommended to be carried forward in the DEIS.

Dover TSM 1
Extension of the NB deceleration lane to the loop ramp leading to US 4 at Exit 6. Restriping of the shoulder area under the overpass will extend the deceleration lane by approximately 400' without impacting the bridge abutment. This measure will prevent peak hour exiting traffic backing up from the loop ramp onto the Turnpike from blocking NB through traffic on the Turnpike.

Dover TSM 2
This action involves merging the 2-lane SB on-ramp at Exit 6 to a single lane prior to the merge with the main line, coupled with carrying two (2) through lanes on the Turnpike through the Exit 6 interchange to merge with the single SB on-ramp. Currently, the 2-through lanes merge to a single lane. The proposed changes will make it safer and easier for drivers to be in the proper lanes (either inside or outside) when planning to exit at Nimble Hill Road or Woodbury Avenue.

Interim Safety Plan (Newington)
The Interim Safety Plan will address the current safety and traffic operational problems at Nimble Hill Road and at River Road due to inadequate weaving distances between these roadways and the median SB to NB turnaround on the Turnpike. By providing a two-way, grade-separated connection under the Turnpike, between Nimble Hill Road and River Road, the median turnaround can be eliminated, thus making the current weaving conditions unnecessary. The existing SB on-ramp from the grade-separated turnaround from River Road is also eliminated which removes another safety and traffic operational problem. This project is under final design and scheduled for construction in 2005.

Other Newington TSM Actions
Upon completion of the Interim Safety Plan, the SB deceleration lane to Woodbury Avenue can be extended to provide improved operations. In addition, a NB auxiliary lane can be developed between Woodbury Avenue and River Road to provide a better merging and weaving condition for traffic exiting the Turnpike from Woodbury Avenue and for traffic exiting at River Road. The NB project will be included as part of the Interim Safety Project.

While reducing the level of traffic turbulence and improving the safety of current traffic operations on both sides of the bridges, Frank reminded all that the basic capacity constraints of the bridges and Turnpike remain, resulting in peak hour congestion and vehicular delay.

SUMMARY

Frank summarized the TDM alternatives which are recommended for further study as follows:

- Expansion of the Downeaster Rail service between Dover and Boston assuming double tracking to the MA line is unnecessary.
- Preservation of the Pease rail spur connection.
- Expansion of intercity bus service between Rochester, Portsmouth and Boston.
- Enhancement of express bus between Rochester and Portsmouth.
- Enhancement of the local bus service, specifically COAST Route 2, Wildcat Transit Route 4, and the Tradeport Trolley Service.
- All employer-based measures.

Tim Roache, SRPC, commented that he assumed that a bike/pedestrian connection would be carried forward as part of the TDM package. Frank O'Callaghan confirmed that bike and pedestrian connections would be incorporated into bridge and roadway alternatives.

Chris Waszczuk solicited input on the list of recommend alternatives. The consensus of ATF was that the list of recommended alternatives to carry forward was appropriate. Jack Newick commented that the list seems "on the mark." Marlon Frink concurred.

SCHEDULE

Frank O'Callaghan reviewed some upcoming dates. He pointed out that there will be public information meetings on June 30th in Dover and on July 1st in Newington. The next ATF meeting is scheduled for August 25, 2004 in Newington.

Marlon solicited any further discussion from the ATF or public. There being none, the meeting was adjourned at 9:25 PM.

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Cross, ATF Chairman, RPC
Marlon Frink, Newington
Sandy Hislop, Newington
Rick Card, GDCC
Maria Stowell, PDA
Bruce Woodruff, Dover
Tom Fargo, SRPC
Scott Bogle, RPC
Cliff Sinnott, RPC
Dave Holden, Portsmouth
Bill O'Donnell, FHWA
Ed Woolford, FHWA
Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Tim Roache, SRPC
Frank O'Callaghan, VHB
Members of the Public

Date/Time: 8/25/04

Project No.: 5142500

Place: Newington Town Hall

Re: Newington-Dover (11238)
ATF Meeting No. 8

Notes taken by: Frank O'Callaghan

Chris Cross called the meeting to order at 6:35 PM by welcoming all and introducing the members of the Advisory Task Force. He noted that Chris Waszczuk and Frank O'Callaghan would update the ATF on the project status, and that ATF meetings are an excellent opportunity for all in attendance to provide input and feedback to the project team. Chris advised the attendees to feel free to contact NHDOT staff or any member of the ATF to offer comments or to raise a question. He reminded everyone of the project's website – www.newington-dover.com – which hosts a wealth of project related information including conceptual improvement plans, reports, and meeting minutes.

Chris then asked ATF members if there were any comments on the draft meeting minutes of June 23, 2004. There being no comments or revisions, the draft meeting minutes were unanimously approved by the ATF. Chris Cross then reiterated his request of meeting attendees to raise questions or offer suggestions by speaking up at the meeting, contacting the NHDOT or ATF representatives, or by logging onto the project website.

Chris Waszczuk then reviewed the meeting agenda, noting recent feedback from the public information meetings and meetings with the federal and state resource agencies. He stated that preliminary ridership estimates associated with various Transportation Demand Management (TDM) alternatives had been further developed. Chris noted that Frank O'Callaghan would address the

impact of these various TDM alternatives on future travel demand and level-of-service requirements for the Turnpike.

Frank began his presentation by referring to a number of questions and issues that were raised at the public information meetings held in June and July. He noted that, assuming current travel characteristics of Seacoast residents, future 2025 travel demands would require the equivalent of four travel lanes in each direction on the Little Bay Bridges (LBB) and mainline Turnpike. He stated that in addition to a basic 8-lane (four lanes in each direction) mainline alternative, the NHDOT has decided to also carry forward a 6-lane (three lanes in each direction) plus Reversible HOV/Transit center lane mainline alternative. Frank then referred to a number of specific questions and issues, which were raised at the Informational meetings:

- If 8-lanes (4-NB; 4-SB) were provided on the LBB and along the Turnpike, the Turnpike would begin to reach capacity (LOS D/E) in 2032.
- South of Exit 1 (Gosling Road), the 2025 Turnpike level-of-service (LOS) is 'C' in the weekday AM peak hour, and 'D' in the weekday PM peak hour.
- The 2025 LOS at the Woodbury Avenue/Gosling Road intersection will be 'C' under both weekday AM and PM peak hours.
- Conceptual Alternatives 10, 11 and 12 in Newington which entail reconstruction of the Woodbury Avenue (Exit 3) interchange impact the historic Isaac Dow House located on Woodbury Avenue. Frank noted that refinements of the concepts pertaining to the cross-section of Woodbury Avenue suggest that the potential impact on the Isaac Dow House property (and on the Beane Farm on the opposite side of Woodbury Avenue) can be minimized. Plan refinement and reviews is on-going.
- The consultant team has reconsidered the development of a 2-lane loop ramp to service westbound US4 drivers exiting the Turnpike northbound at Exit 6. It has been suggested that Alternatives 2 and 3 in Dover be modified to reflect the2-lane loop ramp. The consultant team remains unconvinced of the merits of this 2-lane loop ramp.
    - 2-lane loop ramps are uncommon; in light of the relatively high volume of traffic, and high volume of heavy commercial vehicles, operations will not be comfortable for the average driver;
    - The necessary modifications to the existing ramp geometry will, in conjunction with provisions for the new NB on-ramp, result in ROW/property impacts on the Homestead Lane properties;
    - The free-flow of vehicles from the ramp will be impacted by the limited capacity of US4; i.e., traffic flows could be better managed by signalized traffic operations at the ramp terminals;
    - The signalized/diamond interchange alternative provides a good level-of-service (LOS 'C') and better management of traffic flows without impacting the Homestead Lane property owners.

Frank then referred to the cross-section alternatives for the LBB and Turnpike. He noted that the 8-lane typical would be approximately 146' in width and suggested that the center 50' comprised of the median, inside shoulder areas and inside travel lanes could be reconfigured to provide either a center contra-flow reversible HOV/Transit lane, or concurrent HOV/Transit lanes in each direction. These alternatives would range in width from 146' to 154'. He offered these alternatives as demonstration of the potential flexibility of the 8-lane alternative, should reconfiguration in the future be warranted or desired.

Bob Landman noted that he had previously suggested development of a "Zipper" lane to NHDOT officials as a means of providing a center lane contra-flow HOV/Transit lane. The "Zipper" lane concept is a moveable barrier system that allows one to borrow a lane from the off-peak direction and utilize the borrowed lane for HOV's and transit vehicles traveling in the peak direction. In this way, the overall width of the cross-section is minimized. Frank responded that the "Zipper" lane would fall within the contra-flow center lane cross-section that he had previously described. Bruce Woodruff offered that he was concerned with the overall cross-section width, which he feels should be no wider than the eight lane cross-section (146'). He voiced skepticism about the potential utilization of HOV lanes, and suggested that a dedicated transit lane would be more effective. He stressed that Dover Point is a tightly constrained peninsula and the final pavement width should be utilized effectively.

Frank then proceeded to review a summary of ridership projections developed for a number of transit, rail and TDM alternatives. For each alternative, he noted the potential ridership, single occupancy vehicle diversion, and level-of-service assuming a 6-lane plus one HOV/Transit lane cross-section. He noted that the maximum number of HOVs (539) was approximately 250 vehicles less than the generally accepted viability threshold of 800 vehicles per hour for an HOV lane. Individual bus and rail alternatives ranged in diverted SOVs from approximately 30 to 95 vehicles resulting in Turnpike levels-of-service E-F. Employer-based TDM programs could potentially reduce peak hour SOVs by approximately 200 to 360 vehicles depending on the aggressiveness of the programs. Frank also noted that a combination of an aggressive employer-based TDM program with the three bus alternatives and the enhanced Downeaster rail service could potentially provide LOS 'D' in the AM peak hour, but would still fall short of providing LOS 'D' in the PM peak hour. He stated that this level of potential SOV diversion was part of the rationale for NHDOT's decision to carry the 6-lane plus HOV/Transit lane forward for further study.

Bill O'Donnell pointed out a typographical error on the Summary Table of Ridership, Vehicle Diversion and LOS by TDM Alternative. Under Rail Alternative 2B, the remaining PM peak hour NB traffic volume should be 5,977 versus the 5,496 volume shown. The resultant LOS 'F' does not change. Bill also questioned why the HOV Lane Alternative running between the Dover Toll Plaza and Exit 1 diverted a higher volume of SOV's than the HOV Lane Alternative running between the Dover Toll Plaza and I-95. Frank responded that the Exit 1 alternative provided access to the major employers at the Pease Tradeport. Bill Landman noted that enforcement of HOV lane utilization by multiple passenger vehicles could be by photography, and suggested that NHDOT investigate photo enforcement. Chris Waszczuk noted that legislation would be required to permit photo enforcement.

Dave Holden inquired as to the schedule and decision-making in moving forward to recommend a preferred alternative. Frank responded that the next phase of the project (the draft EIS) would begin in six to eight weeks, and take approximately 12 months to complete. This process would entail detailed analysis of the alternatives being carried forward. Chris Waszczuk added that the decision-making process would be a collective process, involving the Department and FHWA with input from the ATF, resource agencies, and general public through additional public information meetings. Dave asked if it would be feasible to design an 8-lane alternative with staged construction; he admitted to be struggling with envisioning an 8-lane alternative. Chris responded that, operationally speaking, two of the eight lanes (one in each direction) would function as auxiliary lanes allowing traffic to access and egress the Turnpike at the major interchanges at Woodbury Avenue (Exit 3) in Newington and US 4 and Dover Point Road (Exit 6) in Dover. Chris added that he envisioned a preferred alternative that would be comprehensive in nature and include TDM alternatives in addition to infrastructure improvements.

Chris Waszczuk then asked attendees if the project team had missed considering any type of viable alternative. Bob Landman suggested that employer cafeterias at the Pease Tradeport would support reducing daily vehicle trips generated by area employees. Maria Stowell responded that there are several employer-related cafeterias currently in use at the Tradeport and opportunity to increase that number as the Tradeport builds out. Tim Roache suggested that the total long- term transportation solution falls beyond NHDOT – it lies with the land use decisions that municipalities such as Newington, Dover, Portsmouth and others will make over time. Bill Burtis commented on the level of congestion during the current weekday commuting periods along the Turnpike, stating that there was a 20 to 30 minute period during the AM peak hour when traffic flow was significantly stalled. Frank O'Callaghan responded that the weekday evening period of congestion was longer than the AM period, given that there was a higher volume of traffic in the PM peak hour. He noted that both weekday AM and PM periods or windows of congestion would increase as future traffic volumes are projected to increase. Bill noted the 1.2 average vehicle occupancy as an assumption in converting rail and transit ridership estimates to estimates of SOV diversions. Frank responded that the travel characteristics of the Seacoast area were identified from the results of the June 2003 Seacoast Area Travel Survey.

Cliff Sinnott, acknowledging that enhancing or expanding the existing Downeaster rail service offered the advantage of building on an existing service, suggested that potential ridership might be increased if peak hour service could be increased from 1 run to 2. Frank responded that the project team would investigate the operational impacts and cost of an additional peak hour run. Jennifer Schroeder raised the issue of whether infrastructure improvements would in and of themselves generate additional travel demand. Chris Waszczuk responded that the potential for secondary growth and resultant traffic due to increasing the capacity of the Turnpike within the study area would be analyzed during the next phase of study. The project team will utilize a regional econometric model to assess such growth potential.

At this point in the meeting, Frank concluded his presentation by reviewing the summary tables comparing the resource impacts and estimated construction costs of the various interchange and bridge alternatives. One table summarized these impacts and costs assuming eight lanes on the bridge and mainline Turnpike. A second table compared these impacts and construction costs to an alternative that assumed six lanes on the LBB and Turnpike. As Frank reviewed this table, it was apparent that the differences in resource impacts and construction costs were relatively minor. Frank noted that, if one assumed a center, reversible HOV lane in addition to the six lanes, the cross-section width would be similar to the eight-lane alternative, and the corresponding differences in resource impacts and construction costs would be negligible.

Rick Fernald, representing the Newington Exxon Station and the owner of the convenience store located at the intersection of Nimble Hill Road and the Turnpike, asked if the Newington Alternatives (10, 11 and 12) could be modified to include an off-ramp from the Turnpike to Nimble Hill Road. Chris Waszczuk responded that such a modification is possible, and is indicated on the conceptual plans by dashed lines.

Cliff Sinnott asked if an 8-lane infrastructure alternative without TDM alternatives is realistic. Chris Waszczuk responded that a combination of infrastructure improvements with TDM is probably more realistic. Chris then stated that the Seacoast MPO had recently stated their concern of maximizing potential transit ridership through consideration of the dedication of an exclusive transit lane, and that the NHDOT had addressed that issue by carrying forward the 6 plus 1 alternative. He noted that the resource agencies had expressed similar comments vis-à-vis their support for consideration of the 6 plus 1 plus TDM alternative. Chris added that FAA representatives attended the August 5, 2004 resource agency meeting and have been invited to be a cooperating agency. With respect to the recent Seacoast MPO/TAC meeting, Tim Roache stated that the MPO has not reached a decision on

whether to conduct an additional traffic study to assess 2035 study area traffic conditions. Tim then confirmed with Frank O'Callaghan that an 8-lane alternative would not begin to reach capacity (LOS D/E) until 2032. Bill Burtis, noting that LOS 'D' would extend to 2032 and that construction could extend from 2008-2013, suggested that traffic conditions during construction would be an excellent opportunity to begin efforts to change attitudes and increase interest in transit.

Dave Holden complimented the NHDOT in the approach of casting a wide net on identifying and evaluating alternatives to meet the project's purpose and need.

As the meeting approached adjournment, Chris Cross reminded all that Phase 2 of the 5-phase study was concluding, and the time was at hand to speak up and raise any issue or question if one felt that any of the Alternatives being recommended for further study seemed infeasible, or if there are other alternatives or ideas that should be pursued. He stated that the project team is a year away from recommending a preferred alternative based on criteria discussed earlier under the summary table of resource impacts and construction costs associated with infrastructure alternatives. He noted that alternatives for the bridges, interchanges and various TDM actions have been recommended for further study, and he acknowledged that there are other alternatives that fall outside of this project that may contribute to improving regional mobility. The opportunity is at hand to state one's priorities. Bob Landman stated his preference for development of a "Zipper" lane. Chris Cross responded that the "Zipper" lane could be considered within the 3/1/3 alternative. Chris went on to add that toll-related issues are not part of this project; anyone wishing to pursue such statewide issues should take them up with the state legislature in Concord.

Bill Burtis stated that he wanted as few lanes on the bridge and Turnpike as possible. He felt construction of eight lanes for the bridge and highway was unimaginable. He added that the study process would be a catalyst for wider discussion, including regional issues. Chris Waszczuk acknowledged that the Newington-Dover project has initiated discussion of MPO issues beyond the scope and limits of the project.

Bill Landman acknowledged the historic nature of the General Sullivan Bridge (GSB) and stated, in his opinion, public sentiment is evenly split on whether to preserve or remove the bridge. Chris Waszczuk responded that there has been much discussion on the GSB, that the GSB is the second highest rated historic bridge in the state, and that the federal 4(f) process requires the project team to demonstrate that there is no feasible and prudent alternative to removing the bridge, if the recommended preferred alternative includes removal of the GSB.

Tom Fargo asked if the estimated 2032, LOS 'D/E' for an assumed 8-lane bridge alternative reflected the regional travel demand model. Frank responded that the 2025 PM peak hour regional travel demand model projection of traffic volume on the bridge had been increased by an average annual traffic growth rate of approximately 1.8%, the same annual average growth rate determined by the model in projecting 2003 volumes to 2025 volumes. However, a regional travel demand model for 2032 conditions does not exist.

There being no further questions or comments, Chris Cross adjourned the meeting at 8:35 PM, noting that the next meeting of the ATF has been tentatively scheduled for 6:30 PM, November 17, 2004 at Dover City Hall. *[Note: This ATF meeting was rescheduled for January 12, 2005]*

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Cross, ATF Chairman, RPC
Bruce Woodruff, Dover
Tom Fargo, SRPC
Bill O'Donnell, FHWA
Leon Kenison, PDA
Jack Newick, Dover
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Chris Waszczuk, NHDOT
Tim Roache, SRPC
Dave Walker, RPC
Howard Muise, VHB
Frank O'Callaghan, VHB
Members of the Public

Date/Time: January 12, 2005

Project No.: 51425.00

Place: Dover City Hall

Re: Newington-Dover 11238
ATF Meeting No. 9

Notes taken by: Frank O'Callaghan

In the absence of Chris Cross (who arrived after the beginning of the meeting), Bruce Woodruff called the meeting to order at 6:45 PM and welcomed all. He noted that Chris Waszczuk and Frank O'Callaghan would update the ATF on the project status, and asked that the public hold their comments or questions until the end of the presentation.

Chris Waszczuk then explained the role of the ATF in providing guidance to the project team, and that the ATF meetings are an excellent opportunity for all in attendance to provide input and feedback to the project team. He noted that there had been eight ATF meetings to date, and that ATF meets on a regular basis, usually every two or three months. Chris then asked ATF members if there were any comments on the draft meeting minutes of August 25, 2004. Hearing none, he offered two comments: on page 2, he suggested substituting "a two-lane loop ramp" for the "double loop ramp" reference to the Exit 6 westbound off-ramp; he also suggested that reference be made and noted on page 5 that the November 17, 2004 tentatively scheduled ATF meeting at Dover City Hall had been rescheduled to this evening's meeting (January 12, 2005). The draft minutes, as revised, were approved.

Chris Waszczuk then thanked all for braving the snow and freezing rain and attending the meeting. He noted that the project team had lost momentum and that the Rationale Report had been delayed due to the updating of the travel demand model, and he had been hesitant to reschedule the November 2004 ATF meeting until the Rationale Report had been completed. In the context of reviewing the meeting agenda, he stated that the Rationale Report had been published last week, and

that copies had been distributed to ATF members, federal and state agencies requested to be cooperating agencies to the project, other interested resource agencies, the regional planning commissions (RPC and SRPC) and the municipalities of Dover, Newington and Portsmouth. The report culminates the completion of Phase 2 of the study, and documents the rationale for eliminating alternatives and recommending those alternatives to be carried forward for more detailed evaluation in Phase 3 of the study. Chris noted that the Rationale Report had been posted on the project website, www.newington-dover.com, and that NHDOT was requesting comments by February 11, 2005 to continue to progress the project. He stated that some new information would be presented at this evening's meeting, such as updated ridership numbers associated with the various transit alternatives, and roadway and bridge cross section alternatives. There would also be a brief summary of the alternatives recommended to be carried forward. Chris also noted that the project team had reassessed cross section requirements on Woodbury Avenue in the vicinity of the Isaac Dow House, and that a revised cross section would be presented that minimizes potential impacts to the potentially historic property. He further noted that the project team had taken a first cut at identifying and assessing a number of potential infrastructure upgrades and TDM/Transit combinations in meeting the project purpose and need. This preliminary analysis would be presented to initiate comments and discussion. Chris concluded suggesting that three main or core issues have surfaced to date and are pertinent when considering the various options of combining infrastructure upgrades with transit/TDM alternatives:

1. the level of infrastructure upgrade, vis-à-vis 8 vs. 6 basic lanes between Exits 3 and 6;
2. the function, cost, and 4(f) issues related to the potential reuse of the General Sullivan Bridge (GSB); and
3. the level of TDM/transit that is appropriate and cost-effective to complement the infrastructure upgrade.

Frank O'Callaghan then began his presentation; he reviewed the contents of the Rationale Report and the limits of the study area. He noted that following the initial travel demand forecast prepared for the Newington-Dover project, travel demand forecasts were estimated for the Route 1 Bypass study. Review of these forecasts by Portsmouth planning officials and regional planning staff suggested the need to re-examine the nature of the land use changes assumed for downtown Portsmouth, and the schedule of development assumed for the Pease Tradeport. The growth rates for traffic external to the seacoast region were also re-examined. Based on model revisions (which reflected more reasonable downtown redevelopment assumptions, a somewhat slower build-out of the Tradeport, and slightly lower traffic growth rates for traffic bordering the north and south of the Seacoast region), revised travel demand projections were estimated for the Newington-Dover study area. The revised projections are approximately seven percent less than the original 2025 projections documented in the Scoping Report (March 2004). In the absence of non-SOV (single occupancy vehicle) alternatives, four lanes of travel in each direction would still be required to meet the 2025 projected study area travel demand. Frank noted that the 2025 peak hour demand would exceed the 2-lane northbound and southbound capacity of the Little Bay Bridges (LBB) by approximately 900 vehicles per hour during the weekday PM peak hour. As a result, the current (5:00 – 6:00 PM) peak hour of traffic congestion is expected to increase to approximately four hours (3:00 – 7:00 PM). The current PM peak hour delay of approximately eight minutes between Exits 1 and 6 is expected to more than double by 2025 under existing bridge and roadway conditions. He stated that such congestion on the Turnpike takes into consideration the capacity constraints on other area roadways (such as ME 236, NH 108, NH 125), which limit the ability of study area drivers to seek alternate routes. Frank noted that the weekday AM peak hour condition is less intense than the PM peak hour, but that the current single hour of congestion is expected to double by 2025. He also noted that as one increases capacity on the Turnpike from two lanes to three or four lanes, the peak hour travel demand increases, reflecting the diversion of some traffic from area local roadways to the Turnpike.

Frank then reviewed the revised ridership numbers for the various non-SOV alternatives which include employer-based TDM programs, bus, rail, HOV and combinations thereof. He noted the ridership estimates were generated for four alternatives: the 4-lane no-build, 4-lane with the General Sullivan Bridge (GSB) rehabilitated and used as a busway; a 6-lane build condition and an 8-lane build condition. He also presented various cross section alternatives that could be utilized under the 4, 6 and 8-lane infrastructure alternatives. He summarized by stating that no combination of TDM and transit alternatives in conjunction with either the 4-lane no-build or 4-lane with the GSB busway was adequate in meeting the projected 2025 peak hour travel demand. The 6-lane build condition in combination with aggressive TDM, transit and use of an additional HOV lane could meet the 2025 travel demand under certain conditions, and the 8-lane build condition, with or without complementary TDM and transit alternatives, would meet the travel demand of 2025 and beyond.

Frank then reviewed the Alternatives that were recommended to be carried forward. He noted that the range of recommended alternatives was the same as previously recommended at the June and July 2004 Public Informational Meetings and the August ATF meeting with a couple of additions. The No-Build alternative is a requirement of the federal NEPA process, and is a benchmark to measure other alternatives against. A number of Transportation System Management (TSM) alternatives are recommended to improve current safety and traffic operational conditions at Exit 6 in Dover, and at Exits 3 and 4 in Newington. The Newington alternatives are planned to complement the Interim Safety Plan which is currently programmed for construction in 2005. With respect to the proposed improvements to the southbound on-ramp at Exit 6, a resident inquired as to whether or not the Boston Harbor Road on-ramp to the southbound on-ramp from US 4 would be closed. Frank responded in the affirmative subject to emergency access only.

In addition to employer-based TDM programs, Frank noted that three bus alternatives – expanded intercity bus service from Rochester through Portsmouth to Boston, expanded express bus service between Rochester and Portsmouth and expanded local service between Durham and Portsmouth and between Rochester and Portsmouth – and one rail alternative -- expanded peak hour Downeaster service either between Dover and Boston or between Rochester and Boston -- had also been recommended for further study. Three (3) new park and ride facilities [Rochester (Exit 12), Dover (Exit 9) and Durham (US 4 /NH 108)] to support these transit alternatives were also recommended for further study. He noted that provision for a future rail spur into the Pease Tradeport was included into the planning and reflected in Roadway Alternatives 10, 11 and 12 in Newington which are being recommended for further study. He then stated that three bridge alternatives were recommended for further study – rehabilitation and widening of LBB with GSB rehabilitated, rehabilitation and widening of LBB with GSB removed, and replacement of the LBB with GSB removed. Frank noted that each of the bridge alternatives was located to the west of the existing LBB to minimize impacts to Hilton Park and the shoreline near Bloody Point, each bridge alternative would be assessed for either six or eight lanes, and that only the new bridge alternative would improve the existing LBB profile to a 70 mph design (the rehabilitation alternatives would maintain the existing 60 mph design criteria).

Frank then summarized the roadway alternatives that were recommended for further study: Alternatives 2 and 3 in Dover, and Alternatives 10, 11 and 12 in Newington. The Dover alternatives are similar in several respects – the overpass at Exit 6 is converted to 2-way traffic flow; the northbound exiting loop ramp to US 4 is replaced by a diamond-type, traffic signal controlled off-ramp; the missing northbound on-ramp is provided; a grade-separated connection is provided under the Turnpike at Hilton Park; and both alternatives minimize residential and wetland impacts in comparison to Alternative 1. Alternative 3 includes a grade-separated connection for local motorized and non-motorized traffic between Spur Road and Boston Harbor Road which also allows for the

elimination of the traffic signal control at the US 4/Spur Road intersection. Bill O'Donnell inquired as to the reason why the southbound right turn on-ramp depicted in Alternative 2 had been realigned closer towards the center of the interchange. Frank responded that the spacing of the ramp locations afforded better vehicle queue management along the overpass without increasing wetland impacts. Bruce Woodruff added that the realignment would also increase the buffer area between Boston Harbor Road residents and on-ramp traffic.

In summarizing Alternatives 10, 11 and 12 in Newington, Frank noted that common elements include the combining of Exits 3 and 4 at Exit 3; better Turnpike connections to the industrial area located along River Road and Shattuck Way; local connection between Woodbury Avenue and Nimble Hill Road; a local interchange connection to the Tradeport; and the preservation of a future rail right-of-way connection to the Tradeport. Alternatives 11 and 12 relocate the industrial roadway connector and the future rail right-of-way south from the existing right-of-way location to the Exit 3 area. Alternative 12 refines Alternative 11 by simplifying the roadway connection from Woodbury Avenue and Exit 3 to the Tradeport and by modifying the southbound on-ramp at Exit 3 to reduce wetland impacts and to increase traffic weaving distance between Exits 3 and 1. He also noted that Alternatives 10, 11 and 12 could be modified to provide a southbound off-ramp to Nimble Hill Road for the convenience of Newington residents and businesses.

Roy Josselyn, Dover Point Road, inquired if there had been a cost/benefit analysis associated with providing the future rail connection to the Tradeport. Frank responded that no cost/benefit analysis had been conducted; he noted that planning for a future rail connection was consistent with the Tradeport's master plan and could conceivably divert some truck traffic from the Turnpike. Chris Waszczuk added that it was sound planning to consider the future connection and that state legislation required such consideration. He noted that the intent to perpetuate a right-of-way for a future connection did not involve the construction of such a connection as part of the Newington-Dover project.

At this point Chris Waszczuk asked if there were any more questions on the Rationale Report. Tom Fargo inquired as to the public distribution of the report. Chris noted that copies had been distributed, in addition to the ATF members and regional planning officials, to the public libraries and municipal offices in Dover, Newington and Portsmouth. He reminded all that the report was also posted on the project web site (www.newington-dover.com).

Frank then reviewed a modified 4-lane cross section of Woodbury Avenue; recent revisions reflected efforts to minimize the impact of the proposed roadway widening on the historic Isaac Dow House and Beane Farm, which abut Woodbury Avenue. The modified cross section provides two travel lanes, shoulder and sidewalk/utility panel areas in each direction separated by a raised median. Impacts to the Isaac Dow House have been substantially reduced in comparison to initial roadway concepts, and neither the Isaac Dow House nor the Beane Farm buildings are impacted. Chris Cross noted that Alternatives 10, 11 and 12 include the closing of Exit 2, and the rerouting of traffic to Exit 3 and Woodbury Avenue. Frank responded that the traffic analysis of Exit 3 and Woodbury Avenue reflected the increase in traffic and that the interchange would be able to handle the additional traffic. He further noted that further traffic analysis would be conducted during Phase 3 (DEIS) of the study.

Frank then summarized several 8-lane and 6-lane mainline options that combined different levels of infrastructure upgrade with various levels of transit and employer-based TDM programs. The purpose of this preliminary analysis was to initiate discussion on the feasibility, effectiveness and acceptability of various improvement options to meet the project purpose and need. Characteristics were noted for each option such as design year (2025) level of traffic service, extended level of service

(LOS) life (i.e. number of years beyond 2025 that LOS D is provided), degree of flexibility for future management of travel lanes to provide greater traffic flow efficiency, mainline cross section width, construction and other costs, environmental, property and park land impacts, Section 4(f) issues and traffic management during construction. Frank cautioned that the identification and assessment of these options were a preliminary, first-cut to stimulate discussion and to identify common and primary issues that will affect the development of the preferred transportation solution. He also noted that more substantial environmental impacts would potentially be located within the interchange areas, which would be addressed in Phase 3 (DEIS) of the study. Before opening up the discussion and comments on the preliminary assessment of options, Frank stated that the analysis underscored the importance of focusing on the three issues that Chris Waszczuk had mentioned earlier in the meeting – the level of infrastructure upgrade (6-lane vs. 8-lane), the function, cost and 4(f) issues related to the potential reuse of the GSB, and the level of TDM and transit that is appropriate and cost-effective to complement the infrastructure upgrade.

Following Frank's summary, a brief discussion ensued. Tom Fargo noted that Option 3, 8-lanes with the GSB rehabilitated was in fact a 9-lane option. Jack Newick noted that constructing a new bridge to replace the LBB and GSB results in greater property impacts (including building takings) at Dover Point than either of the LBB rehabilitation and widening to the west alternatives, which do not result in the taking of buildings. Bruce Woodruff noted that the new bridge alternative assumed a cable-stayed/signature design. He asked if the bridge tower was a potential issue for aircraft landings and take-offs at Pease. Frank acknowledged that the bridge tower could be an issue. Bruce then noted that the alternative signature design concept – the concrete arch bridge – would eliminate the aircraft related issue and cost less to construct. Bill O'Donnell asked if the multi-use path included on the rehabilitated LBB options with the GSB removed was restricted to non-motorized traffic, or open to local vehicular traffic as well. Frank confirmed that the multi-use path included as part of the LBB rehabilitate/widened options (or new bridge options) was restricted to pedestrians and bicyclists.

Both Tom Fargo and Bruce Woodruff expressed collective opinion that options without TDM and transit programs would receive little community support and were on the surface infeasible. Both questioned the value of HOV or "zipper lanes". Tom Fargo suggested that the cost difference between the "Zipper" Lane Alternative (Option 8) and the 8-Lane Alternative (Option 2) is minor with Option 3 providing a good extended level of service without the capital, operational, and maintenance costs of a zipper lane. Bruce Woodruff emphasized that the City would not support a cross-section wider than 150'. He noted that Dover Point is very narrow, that the pavement width must be used effectively, and that narrower cross sections were far more desirable vis-à-vis minimizing impacts to Dover Point residents. Richard Doucette (FAA) noted that the 8-lane options include either no TDM or moderate TDM, whereas all of the 6-lane options included an aggressive TDM program. Mr. Doucette suggested that the employer TDM program effects are often exaggerated, implying that the service lives of the 6-lane options may be overstated to some degree. Frank responded that capacity constrained conditions tend to encourage more TDM activity than unconstrained conditions. As such, 6-lane options were combined with the higher level of TDM, as opposed to the 8-lane options which provide more capacity. He then added that both aggressive and moderate TDM could be combined with the 6-lane options to provide a range of service life. Another resident questioned the volume of traffic which might utilize the proposed grade-separated connection (under the Turnpike) linking both sides of Hilton Park. Frank noted that the volume on the connector road would be discussed during Phase 3 of the study.

Nora Kelley, Dover Point Road, noted that the Pease Tenants Association had recently conducted a survey of its tenants which touched upon TDM and transit activities. Frank responded that he would follow up with the PDA. In response to a question on service life of improvements, Frank noted that it is desirable, from a planning and design perspective, to build in future flexibility to the preferred

alternative so that travel demands beyond the 2025 design year can be met in the most cost-effective and least impacting manner.

Leon Kenison, PDA, inquired as to the project construction schedule. Chris Waszczuk responded $100 million is currently programmed for the 2010 - 2012 period, and that construction could extend for an approximate 5-year period. However, Chris noted that the project's engineering and environmental work is being progressed to allow construction to begin sooner (as easily as 2008), in the event that additional funding becomes available and all the permits and approvals are secured. Nora Kelley, unfamiliar with the "HOT-Lane" terminology requested the definition. Chris responded that HOT lanes are high occupancy toll lanes. HOT lanes are HOV (high occupancy vehicle) lanes that can be used by single occupant vehicles, provided they pay a fee. Tom Fargo questioned the feasibility of special lanes such as an HOV lane. He questioned the cost-effectiveness of such a facility and inquired as to the access points and limits of such a facility. Frank responded that given the compact nature of the study area, and the spacing between interchanges, it was feasible to run the HOV facility between the Dover Toll Plaza and Exit 1 (Gosling Road) with access/egress at only these two locations. Traffic from US4 and Dover Point Road would not be able to utilize the facility. In light of the roadway widening associated with the 8-lane options which would result in a reduction of the buffer zones currently existing between residential areas and the Turnpike, Cody Cartnick, Boston Harbor Road, inquired as to the potential for noise barriers as part of a noise abatement program. Frank responded that a noise analysis would be conducted as part of the Phase 3 study, and where federal noise criteria were met, noise mitigation would be proposed.

The meeting adjourned at 8:40 PM.

Next meeting of the ATF is scheduled for February 23, 2005 at 6:30 PM in Newington Town Hall.

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Cross, ATF Chairman, RPC
Tom Fargo, SRPC
John Burke, Portsmouth
Jack Newick, Dover
Bruce Woodruff, Dover
Sandy Hislop, Newington
Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Butch Waidelich, FHWA
Jim Garvin, DHR
Tim Roache, SRPC
Frank O'Callaghan, VHB
Members of the Public

Date/Time: 2/23/05

Project No.: 5142500

Place: Newington Town Hall

Re: Newington-Dover (11238)
ATF Meeting No. 10

Notes taken by: Frank O'Callaghan

Chris Cross, ATF chairman, called the meeting to order at 6:40 PM and welcomed all. He explained the role and function of the Advisory Task Force (ATF), noting that members represent the communities of Newington, Dover and Portsmouth and that ATF members have offered comment and advice to the project team and assisted in refining alternatives that were being developed and considered for further study. Chris stated that members of the public would be asked to comment during the presentation of information following comments and questions from ATF members. From a schedule perspective, he noted that development and refinement of a preferred alternative would likely take a year's time, and that ideas and suggestions from the public are welcome. He also noted that a representative from the Portsmouth Chamber of Commerce would be joining the ATF, and reminded all of the wealth of information contained on the project website – www.newington-dover.com.

Chris then asked ATF members if they had any review comments on the draft ATF meeting notes of January 12, 2005. Chris Waszczuk noted two minor edits – a misspelling of Leon Kenison's name in the attendees list, and a clarification on page 3 that one rail alternative (expanded Downeaster service) was being carried forward for further study. Frank O'Callaghan noted a typographical error on page 5, where a reference to a cost comparison between Options 8 and 3 should have referenced Options 8 and 2. There being no further edits or corrections, the draft meeting minutes of January 12, 2005 were unanimously approved as revised.

Chris Cross then requested comments from the ATF members. Chris Waszczuk stated that NHDOT has received three comment letters on the Rationale Report that in general concur with the range of alternatives that are being carried forward for further study. He noted that there were several comments (i.e. location of soundwalls, minimizing impacts to Hilton Park, location of the Hilton Park connector, level of TDM, profile of the Turnpike, etc.), which would be addressed as the study progresses, and that he would summarize the response to comments at the next ATF meeting. Chris Cross then asked members of the public who were in attendance if anyone had any questions or comments. There being no public comments, Chris Waszczuk reviewed the meeting agenda and noted that copies of the agenda and other meeting information were available for those in attendance.

Frank O'Callaghan then began a macro level review of 8 and 6-lane options that varied by treatment of the Little Bay Bridges (LBB), the General Sullivan Bridge (GSB), the level of transit improvement, the level of employer-based TDM activities and the width of pavement cross section. He referred to a matrix summary (handout) that compared the general characteristics and impacts associated with each of the 10 options. Frank noted that the 8-lane options generally had more property impacts than the 6-lane options, and that the off-line replacement of the LBB (Options 4 and 5) impacted 10 buildings in comparison to the other 8-lane and 6-lane options which impact 3 buildings. He noted that Dover ATF representatives have previously expressed concern over pavement cross sections that exceed 150' in width, options that do not include some level of transit and TDM, and the lack of ridership to justify HOV lanes. Frank stated that the major impacts on Hilton Park resulted from the location of the local connector road, and that both moderate and aggressive TDM programs were combined with each of the 6-lane options. He noted that reuse of the GSB for pedestrians, bicyclists, recreation, and possibly for transit use only during reconstruction of the LBB was included in several of the options, and that there would be a serious 4(f) justification issue under all the options that included removal of the GSB due to its historical significance. Frank concluded his summary of the comparison of options by noting that the options varied in their respective ability to be modified in the future to accommodate travel demands beyond 2025, and that the 6-lane options required an auxiliary lane between Exits 3 and 6 to manage traffic that enters and exits at these interchanges and traffic that changes lanes between these exits. He then requested comments from the ATF.

Bruce Woodruff inquired as to the system-related constraints on travel demand in estimating the life span of improvements and whether the Seacoast Travel Demand Model took into account the potential for diversion to other routes when the Turnpike is congested. Frank responded that system constraints, such as the capacity of US 4 and ME 236 are reflected in the travel demand model estimates for future travel. The effects of peak spreading – expansion of the current weekday PM peak hour of traffic (4:45 – 5:45 PM) to a peak period of 3:00 – 7:00 PM under 2025 No Build traffic conditions – and peak shifting – drivers that will divert to other roadways such as NH 108, NH 125 and ME 236 as future levels of peak hour congestion increase – are also reflected in the future traffic volumes on both the Turnpike and other state and local roadways. Frank noted that as the Turnpike capacity is increased, traffic would tend to divert from local roadways to the Turnpike.

Chris Cross noted that Newington generally supports removal of the GSB due to its presence on Dover Point and the valuable space it takes up for a limited transportation benefit. With respect to the assessment of Options, he stated a preference for Option 10 (Peak Hour Shoulder Use). In comparison to Option 9 (Borrow Lane/Zipper Lane), he noted that a zipper lane might be confusing to drivers, whereas peak shoulder use (Option 10) entails permanent lanes. John Burke inquired as to the safety aspects of peak shoulder use. Frank responded that shoulder use, as proposed, would be adjacent to the median, which is safer and less confusing in comparison to the current peak period outside shoulder use along sections of I-93 and I-95/MA 128 in Massachusetts which can be confusing and challenging when driving through interchange areas.

Gail Pare expressed concern with the aesthetics of a very wide bridge and suggested an aerial or plan view rendering or model would be helpful in visualizing the various options. Chris Waszczuk noted that computer generated visualization will be completed for the Little Bay Bridges to provide before and after comparisons. He also noted that the Rationale Report contained different cross section plans associated with each of the bridge options which would be of assistance in trying to identify the scale and impacts of each option.

Bruce Woodruff stated that he would eliminate 8-lane Options 1, 2 and 4, and 6-lane Options 6, 7 and 8. He offered the following rationale: Option 1 removed the GSB, had no transit and no TDM; Option 2 removed the GSB; Option 4 removed the GSB and had no transit; Options 6, 7, and 8 require additional traffic management lanes and provide less service life than Options 9 and 10. Bruce further noted that while Option 3 removes the GSB, it does provide transit. Option 5 preserves the GSB, and provides transit and TDM programs which the Dover community supports. In comparing Options 9 and 10, he stated that a zipper lane (Option 9) will require constant maintenance, while Option 10 (peak shoulder use) provides the "best bang" for the dollar.

Tim Roache asked if the project would support employer-based TDM programs. Frank responded that such support could be directed to Transportation Management Association, such as the Greater Portsmouth Chamber of Commerce, which promotes such activities as ride-sharing matching and providing emergency ride-home service to ride-sharing employees.

Butch Waidelich, FHWA, addressed the 4(f), historic resource issue associated with the GSB. He noted that before one could remove the GSB as part of any option, one must first demonstrate that there is no feasible and prudent alternative to the bridge removal. Since there is a feasible alternative, i.e. use of the GSB for a multi-use path (bicycle and pedestrian use) and possibly transit use, the basis for GSB removal would be prudency, i.e., the cost of rehabilitation being excessive or an unreasonable expenditure of limited resources. He then noted that if a signature off-line LBB replacement bridge is considered feasible (Option 5) which would remove the GSB and cost approximately $29 M - $41 M more than other options (3 and 10) which would rehabilitate and widen the LBB and rehabilitate the GSB, then one cannot argue that preserving and rehabilitating the GSB is imprudent due simply to the added cost. As such, if Option 5 is carried forward, one cannot justify the removal of the GSB based on cost. He further stated that this situation needs to be understood and assessed early in the evaluation of options and alternatives.

Further discussion ensued relative to the GSB. Tom Fargo noted the deteriorated condition of the bridge, its seismic vulnerability and its profile which limits driver sight distance to 45 MPH. Chris Cross added that the bridge is very narrow, and if rehabilitated, has a limited reuse capability, and as such, the cost of rehabilitation should be relevant to the justification decision of whether or not to preserve the bridge. Jack Newick stated that feasible options need to be cost effective.

Jim Garvin noted that the DHR had just received a report authored by an historic resources specialist that documents the historic significance of the GSB at the local, state and national level. He added that the GSB scored, on a comparative basis, 28 points, 2 points below the highest rated (30 points) historic bridge in the state. Bruce Woodruff stated that the current pedestrian and bicycle use of the GSB is justification for rehabilitation, and that potential transit use is not critical to justifying its rehabilitation and reuse. John Burke added that the GSB is a system component of the bicycle system that serves the Tradeport and the City of Portsmouth.

Chris Waszczuk then asked the ATF if they thought it was possible to eliminate options that did not make sense for one or more reasons, e.g. the absence of transit or TDM? The consensus of the ATF

was that HOV lanes were not practical, at this time, since ridership estimates were relatively low and the cross section requirements result in relatively higher impacts due to pavement width. The zipper lane concept involves undesirable maintenance and operating conditions and costs. After some discussion, the ATF voted to eliminate Options 1, 4, 7, 8 and 9 from further consideration and to carry Options 2, 3, 5, 6 and 10 forward for further development. John Burke asked if further analysis of Options 2, 3, 5, 6 and 10 would be conducted. Chris Waszczuk replied that additional engineering of these options would be initiated.

Chris Waszczuk then referred to the meeting agenda and a handout summarizing first a number of reasons to retain the General Sullivan Bridge, followed by a number of reasons to remove the GSB. With respect to retaining the bridge, Chris cited: historic preservation; reuse for recreation, pedestrians and bicyclists; the future flexibility and redundancy provided by a second bridge with respect to incident management and emergency access; and congestion relief during construction of the LBB if a dedicated bus lane is feasible. He echoed Butch Waidelich's, FHWA, comments regarding the significance of the 4(f) resource, and noted that justification of removing the GSB hinged on demonstrating that there is no feasible and prudent alternative to its removal. He noted that the basis of prudency is cost. Chris also referred to the handout prepared by Jim Garvin, DHR, that highlighted the historic significance of the bridge and excerpted portions of the summary. He then enumerated a number of reasons to remove the GSB: initial costs, noting that the net initial cost to rehabilitate the bridge ranged from approximately $8M - $11 M which was the heart of the prudency issue; future maintenance costs, inspection costs and liability; navigational opening within the channel; and the potential to expand Hilton Park and improve E-W connectivity. Chris stated that he tried very hard to be objective in summarizing the pros and cons related to either bridge rehabilitation or bridge removal, and that there was, in his view, no clear cut or obvious conclusion. The preservation of the historic resource will be weighed against the additional cost of bridge rehabilitation and maintenance. Chris concluded his remarks on the GSB by noting the importance of construction sequencing vis-à-vis rehabilitation of the bridge. If the GSB were rehabilitated first, the current bicycle and pedestrian connection would be lost for two years, whereas the potential for a bus lane on the GSB during the construction of the LBB would be possible. If the bus lane proves to be feasible, then the next phase of construction would need to include the Exit 6 interchange, which would be necessary to take advantage of the GSB busway. If the GSB rehabilitation followed the LBB reconstruction, the pedestrian/bike connection could be temporarily provided on the LBB during the time the GSB is rehabilitated. On the other hand, if the GSB were removed, reconstruction of the LBB would likely be easier.

Tom Fargo asked, given the current condition of the bridge, could rehabilitation of the GSB wait until 2012 or the last stage of project construction. Chris responded that while there are no guarantees, the bridge is monitored periodically to ensure safe passage for pedestrians and bicycles. He noted that the floor system is very deteriorated; however, the truss elements are in reasonable condition, and that the piers, while showing some cavitation, sit on ledge. Jack Newick added that the absence of some grout in the piers is visible. Tom Fargo asked for recollection of the US Coast Guard's position. Chris responded that it is the USCG's view that the bridge cannot be ignored since it would be a hazard to navigation if it were not maintained. The disposition of the GSB will need to be addressed as part of this project.

John Burke inquired as to the mitigation costs if the GSB is removed. Chris Waszczuk suggested that, as a minimum, costs to memorialize the bridge would be required. Jim Garvin noted that discussion of mitigation costs is premature; the focus of discussion should be on preserving the bridge. If it comes to mitigation, costs will likely be more than memorialization. He noted that there are many abandoned and bypassed bridges statewide. Chris responded that he understood Jim's point, and that he only mentioned mitigation at this moment so that everyone would understand that there would be an additional cost if the GSB were removed. Chris Cross stated that he felt that retention of

the GSB is a problem for Dover Point given the narrow land mass. Bruce Woodruff concluded this discussion of the GSB by suggesting that resolution of the GSB must reflect a balance of needs: needs of residents, regional travel demand needs, and recreational needs.

Frank O'Callaghan then summarized a recent meeting among transit operators (COAST and Wildcat), regional planners and the project team that discussed the potential use of the General Sullivan Bridge as a busway during reconstruction of the Little Bay Bridges (LBB). The goal of such transit use would be to assist in traffic management during construction, the promotion of transit use, and increasing the justification for reuse and preservation of the GSB. Frank reviewed the potential routing and noted the difficulty northbound in connecting from the GSB and Dover Point Road/Boston Harbor Road to the Turnpike due to the Exit 6 configuration and lack of a northbound on-ramp. Temporary connections from Spur Road to the Turnpike were explored and deemed infeasible. As such, he noted that if the GSB were to be used as a busway for traffic management, Exit 6 would also have to be reconstructed prior to initiating reconstruction of the LBB. Transit operations through the study area consist of C&J intercity service from Dover to the Portsmouth Transportation Center (PTC) and south via I-95 to Boston, local COAST Route 2 (Rochester – Portsmouth) and Wildcat Route 4 (Durham-Portsmouth) and COAST express service between Rochester and the Tradeport/PTC scheduled for 2006. The only service deemed to benefit from the GSB busway is the COAST express service, assuming that a connector roadway from Nimble Hill Road to the Tradeport is constructed (consistent with the preferred solution for the Exit 3 interchange) to complete the transit route. Such a system would serve potentially four peak period buses southbound in the morning and northbound in the evening. The C&J service is likely to remain on the Turnpike and access the PTC directly from I-95. Both the COAST and Wildcat local service require connection to the retail activities located along Woodbury Avenue which would not benefit from the GSB route. As such, the local service will also remain on the Turnpike. Frank concluded by noting that reuse of the GSB for buses appeared potentially viable for only the COAST express service and requires the first approximately $50M of project construction for the necessary GSB rehabilitation, Exit 6 reconstruction and Tradeport connection. This would delay reconstruction of the Little Bay Bridges.

Bruce Woodruff and John Burke both concurred that the COAST express service was the only potentially viable service that could utilize the GSB. Both emphasized that the COAST service, which is slated for start-up in 2006 and intended for commuters, needs a dedicated lane to provide consistent and effective service. Mike Dugas noted that if the GSB is rehabilitated as a first phase project, the current pedestrian and bicycle connection would be lost for approximately two years. Gail Pare asked if the GSB could be re-opened to local traffic. Frank responded that opening the GSB to local traffic was unlikely given the concern for residents' quality of life; use by employer van pooling may be viable. Both Bruce Woodruff and John Burke agreed that potential transit use of the GSB was only viable during construction of the LBB. They questioned whether an evaluation of potential ridership during construction could be evaluated. Frank observed that the COAST express service would be operational for two to four years prior to project construction, depending on availability of funding, and will have ample time to evaluate ridership. It is quite possible that, given construction related delays on the Turnpike, ridership may be sustained or increased without the GSB busway due to the convenience of not driving. John Burke noted that it is worthwhile to continue to investigate the GSB transit route given that demand for the service may increase providing a great transportation benefit for the area. He asked if VHB could estimate the difference in travel times between the GSB transit route and the Turnpike transit route. Frank responded that VHB would conduct such an analysis.

The final meeting agenda item was review and discussion of preliminary mainline Turnpike profile alternatives. Frank referred to preliminary profile and slope impact plans for Alternative 3 in Dover and Alternatives 10 and 12 in Newington. In contrasting Alternatives 10 and 12, he noted that under

Alternative 12, the industrial connector roadway and the relocated railroad right-of-way (ROW) travel under the Turnpike with the extension of Woodbury Avenue traversing above the Turnpike and connecting to the Exit 3 southbound ramps, the Tradeport and Nimble Hill Road. Woodbury Avenue would be approximately 25' above the new grade of the Turnpike, or approximately 20' above the current grade of Turnpike. Alternative 10 locates the industrial connector roadway and future railroad R.O.W. (traversing under the Turnpike) to the north of Woodbury Avenue at the location of the existing railroad R.O.W. The elevation of the Turnpike at this location is approximately 27' above the current elevation of the Turnpike. On the Dover side of the channel, Frank noted that the grade-separated connector in the vicinity of Hilton Park had been relocated to the north to minimize impacts on Hilton Park. Tom Fargo suggested that an alternative for mitigating the impact on the park would be to extend the bridge, thereby creating additional parkland below the bridge which might compensate for the parkland impact of the connector being located further south towards the channel. VHB will assess the parkland impacts of both locations.

Tom Fargo questioned the need for planning and providing for a future railroad R.O.W. to the Tradeport; he suggested eliminating the R.O.W. from the project, and in reference to Alternative 10, suggested keeping the Turnpike at-grade and flying the industrial connector roadway over the Turnpike. Chris Waszczuk responded that it was his understanding that planning for the future rail R.O.W. connection to the Tradeport was reflected in the Tradeport's masterplan and required by state legislation. He offered to research and confirm his understanding. Frank noted that his understanding was the same. Tom responded that he didn't see the connection between preserving a rail R.O.W. which, in his view, did not currently exist, and the project's purpose and need. Aside from the planning perspective, accommodating for the future rail R.O.W., as proposed under Alternative 10, resulted in potential noise and visual impacts. Frank responded that the potential for future transfer of goods movement into or from the Tradeport from trucks to rail would, if realized, have a positive impact on study area transportation efficiency, not to mention regional air quality. Chris Cross offered that there were elements of Alternative 12 that are preferable to Newington. He then asked for further public comments. There were none. He thanked all for their attendance and input. He reminded all of the next ATF meeting scheduled for March 30, 2005 at 6:30PM in Dover City Hall.

The meeting was adjourned at 9:50 PM.

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE (ATF) MEETING
NEWINGTON TOWN HALL
FEBRUARY 23, 2005

Name Gail Pare
Affiliation NHOC
Address 188 Little Bay Rd
Newington NH
03801

Phone /Email jackpare@hotmail.com

Name Cliff Abbott
Affiliation 8 Hannah Lane
Address 03801 Newington

Phone /Email SKIP28408@hotmail.com

Name John Stockton
Affiliation The Louis Berger Group
Address 1001 Elm St. Ste 300
Manchester, NH 03101

Phone /Email 644-5200 /jstockton@louisberger.com

Name Tim Roache
Affiliation SRPC
Address

Phone /Email TROACHE@STRAFFORD.ORG

Name James Garvin
Affiliation NH Div. Hist. Resources
Address 19 Pillsbury St
Concord NH 03301

Phone /Email (603) 271-6436/
jgarvin@nhdhr.state.nh.us

Name

Affiliation

Address

Phone /Email /

Name John Bunker
Affiliation City of Portsmouth
Address Public Works Dept

Phone /Email 766-1415 /

Name

Affiliation

Address

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE (ATF) MEETING
NEWINGTON TOWN HALL
FEBRUARY 23, 2005

Name Fred Stepanek, Barbara Rushmore
Affiliation
Address 191 Spur Rd. Dover

Phone /Email 749-1151 / bjrushe Comcast.net

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE (ATF) MEETING
NEWINGTON TOWN HALL
FEBRUARY 23, 2005

Name Dorothy M WATSON
Affiliation Conservation Com.
Address 133 Fox Point R
Newington, NH 03801
and Historical Com.
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
Phone /Email _____/_____

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Cross, ATF Chairman, RPC
Bruce Woodruff, Dover
Jack Newick, Dover
Maria Stowell, PDA
Sandy Hislop, Newington
Chris Waszczuk, NHDOT
Marc Laurin, NHDOT
Bill Oldenberg, NHDOT
Bob Landman, Seacoast MPO
David Walker, RPC
Tim Roache, SRPC
Frank O'Callaghan, VHB
Peter Wellenberger, GBERR
Members of the Public

Date/Time: 3/30/05

Project No.: 5142500

Place: Dover City Hall

Re: Newington-Dover 11238
ATF Meeting No. 11

Notes taken by: Frank O'Callaghan

Chris Cross, ATF Chairman, called the meeting to order at 6:37 PM. He welcomed all and noted that the Advisory Task Force (ATF) and project team were looking for community input. He explained that the evening's agenda included follow-up on several issues that were discussed at the previous ATF meeting (2/23/05). Chris explained that as each agenda item was presented, there would be opportunity for questions and comments from the ATF, followed by questions and comments from the public. He also noted that written comments or questions could be submitted to Chris Waszczuk following the meeting either by mail or via the project website – www.newington-dover.com, and that Chris would respond and follow-up. The ATF members, Bob Landman and David Walker then introduced themselves.

The draft ATF meeting minutes of February 23, 2005 were then reviewed. There being no comments, the draft meeting minutes were unanimously approved by the ATF. Chris Cross noted that Dave Parkinson would replace John Burke as the City of Portsmouth's representative on the ATF due to John's imminent relocation from New Hampshire to Illinois. Chris Waszczuk then thanked all for coming out and attending the meeting. He stated that at the last ATF meeting (2/23/05), he announced that review comment letters on the Rationale Report had been received from the ACOE, USEPA, the SRPC and the City of Dover. The letters generally concurred on the reasonableness of the range of alternatives that were being carried forward for further study; he added that it would have been better to have received more comments on matters of concurrence. He noted that engineering and environmental studies were on-going as part of the Draft Environmental Impact Statement (DEIS) and that the project team continues to seek comment and input from both resource agencies and the public. He then requested Frank O'Callaghan to briefly review the comments received to

date, and the status of the project team's response, noting that some comments will require further discussion.

Frank began by noting that the Army Corp of Engineers (ACOE) concurred with the reasonableness of the range of alternatives being carried forward. The USEPA also concurred with the range of alternatives being studied. The EPA encouraged consideration of combining infrastructure upgrade alternatives with TSM, TDM and Transit alternatives. They expressed concern over future peak hour operations at the Dover Toll facility. Frank noted that VHB had developed several computer model simulations of 2025 peak hour conditions, and that he would address this issue later in the agenda. The EPA expressed disappointment that a separate mesoscale (daily) air quality analysis of ozone precursors for the project area would not be conducted as part of the study. Frank responded that a regional mesoscale analysis had been recently conducted by the Rockingham Planning Commission (RPC) and would be updated by the RPC this year. Dave Walker confirmed that the Rockingham Planning Commission is currently updating the mesoscale air quality analysis for the Seacoast region. Frank added that the Newington-Dover project would conduct a microanalysis of potential CO hot spots. The EPA comments concluded with a recommendation that NHDOT require diesel retrofits and use of low sulphur fuels as part of the future construction specifications. Frank noted that the NHDOT would require all contractors to meet federal and state requirements at the time of construction.

The Strafford Regional Planning Commission (SRPC) commented that the Newington-Dover project is the highest transportation priority of the Seacoast MPO, that they concur with the range of alternatives being carried forward, and that the focus of the study is the Little Bay Bridges. In recognition of limited funds and fiscally constrained times, the SRPC believes the project must focus on Purpose and Need, and build flexibility into the design solutions so that future improvements by the state and others can be accommodated. While the SRPC supports employer-based TDM programs and suggests the need to allocate mitigation funds, they believe that HOV alternatives are infeasible for the 2025 design year due to the compactness of the study area and insufficient ridership. They suggest building flexibility into the current design solutions so that future conversion to an HOV alternative beyond 2025 may be possible. The SRPC supports expansion of the Downeaster rail service (Dover-Boston) and notes the difference in construction cost estimates developed by the Northern New England Passenger Rail Authority – NNEPRA ($1.2M) and VHB ($9.9M) for adding one additional daily peak period trip between Dover and Boston. Frank explained that the difference in cost was due to equipment – VHB assumed that a new train set would need to be purchased, while NNEPRA assumes that equipment is available (at no additional cost) from AMTRAK under NNEPRA's current agreement with AMTRAK. SRPC also supports the bus alternatives under consideration and notes that reduced headways will maximize ridership. With respect to bicycle and pedestrian mobility, the SRPC notes that the General Sullivan Bridge (GSB) serves to provide system connectivity and that system connectivity needs to be preserved. The commission suggests studying bicycle infrastructure improvements which fall outside of the Newington-Dover study area; Frank noted that consideration of such bicycle improvements as part of the project would be confined to the study area. Lastly, SRPC supports the rehabilitation of the GSB, citing the benefits of system redundancy, bicycle and pedestrian system connectivity, peak period transit use during construction of the LBB and the potential of GSB use as part of a local transit route around Great Bay. The SRPC also notes that, with respect to pedestrian and bicycle system connectivity, the GSB will provide a more pleasant and appealing experience for the pedestrian and bicyclist, in comparison to alternatives which remove the GSB, and attach a multi-use path adjacent to the rehabilitated and widened LBB.

Frank then summarized the comments from the City of Dover. He began by referring to Exit 6, and comparing the diamond northbound interchange, as proposed in Alternative 3, with a 2-lane loop ramp which the City has offered for consideration as a free-flow alternative to the signalized

diamond. He noted that the diamond alternative provides a relatively high (LOS "C") level-of-service with the traffic signal operations providing gaps within the traffic stream on the Turnpike overpass that will make it easier for traffic to exit Dover Point Road and Spur Road in contrast to the free-flow, 2-lane ramp condition. He stated that the project team still has reservations with respect to driver comfort and safety while negotiating the 2-lane ramp (particularly when adjacent to tractor trailers), and noted that the loop ramp necessitates a wider and longer bridge over the Turnpike which increases construction costs by at least $2M in comparison to the diamond interchange. The free-flow of traffic at the northbound interchange will not introduce gaps in the traffic stream – in contrast to the signalized diamond interchange – which will make it more difficult for local traffic to exit Dover Point Road and Spur Road. Frank noted that he would present traffic model simulations of both the signalized diamond and 2-lane loop ramp concepts at Exit 6 later in the meeting. The City of Dover cited the potential need for sound barriers as neighborhood mitigation. Frank responded that a noise analysis is included as part of the study, and where sound levels are estimated to exceed FHWA thresholds for noise abatement, noise mitigation will be proposed. This element of the study is awaiting refinement of alternatives and has yet to be done. The City is also concerned over the location and alignment of the proposed grade-separated roadway which traverses under the Turnpike and connects the west and east sides of Hilton Park, and the potential impact of the connector roadway on Hilton Park. The City prefers a connection location as close to the channel as possible, while minimizing impacts to the park. Frank referred to a number of slides depicting Hilton Park connector alternatives. One alternative locates the connector roadway approximately 1200' north of the channel (STA 621+75), assumes the rehabilitation of the GSB, would cost approximately $4.2M, would minimize impacts to the park, and requires maintaining a raised profile of the Turnpike between the LBB and the connector/underpass. Two other alternatives locate the connector roadway in proximity to the channel. One assumes the rehabilitation of the GSB (STA. 611+00) and involves extending the LBB by 100' and the GSB by approximately 162' to allow the connector roadway to pass under the bridges. Construction cost would be approximately $9.7M ($5.5M more than the northerly alternative) due principally to the additional bridge and local roadway construction. The additional area created under the bridge would be less than the estimated impact on the park due to the local roadway connections. This area, which has been suggested to be used as potential parkland, will have a vertical clearance of approximately 15 feet. The other alternative that provides the local roadway connector adjacent to the channel assumes the off-line new signature bridge and removal of the GSB (STA. 610+75). This alternative would extend the new signature bridge by approximately 100', require approximately 1,000' of retaining wall to minimize impact to park land, and cost approximately $7.4M ($3.2M more than the northerly alternative). Frank noted that the off-line, signature bridge resulted in greater property impacts (an estimated taking of 10 structures) in Dover than the on-line rehabilitation/widening alternatives (an estimated taking of 3 buildings).

Frank then referred to a graphic in identifying a number of Newington-related issues that the City raised. Alternatives 10, 11 and 12 have a number of common elements: provision of a local traffic connection between Nimble Hill Road and Woodbury Avenue/Exit 3, improved industrial traffic connection to Exit 3, planning for the perpetuation of the existing railroad right-of-way connection between the Newington Branch and the Pease Tradeport, and a new roadway connection between the Tradeport and Exit 3. The City raised the question of whether or not these design elements of the Newington alternatives support the project purpose and need. Frank responded that there was a rational nexus to the project purpose and need, given the aforementioned design elements would improve either safety or transportation efficiency, or both, within the study. For example, improved local connection allows local residents and employees to avoid using the Turnpike as a local connection between Exits 3 and 4 (in contrast to existing traffic conditions which require such use of Turnpike); potential movement of goods by rail as opposed to truck would improve efficiency and air quality; and providing a second turnpike access (at Exit 3) to the Tradeport will extend the life of the Exit 1 interchange (Gosling Road/Pease Boulevard) by reducing the Tradeport-related travel at Exit 1.

With respect to passenger rail and bus transit, the City of Dover supports the expansion of the Downeaster service between Dover and Boston (Rail Alternative 1A in the Rationale Report), and generally supports the transit alternatives being carried forward for further study, noting that reduced headways will maximize potential ridership. The City does not support HOV and Borrow Lane alternatives due to the insufficient ridership demand for HOV's, and the additional cost, maintenance and operations associated with borrow or zipper lanes. The City questions the warrant for a traffic signal at the Dover Point Road intersection located just to the east of the northbound diamond interchange depicted in Alternative 3. Frank responded that final design refinements would determine the appropriateness of the signal operations. The project team is concerned with the safety of residents entering and exiting Dover Point Road. Traffic gaps provided by traffic signal operations at the diamond interchange may be sufficient such that the additional signal at Dover Point Road is unnecessary. Finally, the City noted the need for signage along Boston Harbor Road directing drivers [assuming the existing ramp from Boston Harbor Road to the southbound Turnpike on-ramp is closed under implementation of a TSM improvement recommendation] to enter the southbound on-ramp from US4; the City also questions the need to close the ramp. Frank responded that this TSM improvement plan is still under review and stated that there will be a future public information meeting prior to finalizing the plan and programming its implementation.

At this point, Frank paused for comments and questions pertaining to his summary of review comments on the Rationale Report. Chris Waszczuk noted that the PDA had previously commented on the importance of retaining the rail right-of-way as regards to redevelopment at the Tradeport, and as reflected in the 1995 update of the Tradeport's Development Plan. Chris distributed a copy of a letter from the Pease Facilities Director to the ATF committee. He explained that the letter notes the rationale for the rail corridor preservation and includes excerpts of the Pease Development Plan Update that are relevant to rail access. Maria Stowell added that the 1995 update to the Development Plan was mandated by the state legislature, and that any deviation from the plan would require legislature approval.

Bruce Woodruff had several comments. With respect to transit, he stated that the General Sullivan Bridge could potentially serve the proposed COAST express service scheduled for 2006, and noted the problem connecting northbound to the Turnpike in Dover after crossing the GSB. He suggested buses could utilize the current one-way connection between the LBB & GSB that flows easterly beneath the LBB and leads to Exit 5. He suggested a need for a master plan for Hilton Park that would reflect how pedestrians, bicycle and vehicle connections could be accommodated while minimizing impacts to the Park. He noted that providing the local roadway connector to the north of the channel (STA. 621+75) results in retaining walls to maintain the elevated profile of the Turnpike to traverse over the local roadway. He suggested that a combination of elevating the Turnpike and lowering the grade of the connector road may be necessary to minimize the effect on Dover Point. Chris Waszczuk concurred with regards to the Turnpike profile impacts and noted that using as low of a grade as possible for the connector road will be investigated. He added that the pedestrian and bicycle connection could be provided adjacent to the channel – as it is today – assuming that the roadway connector is located to the north of the channel. Chris explained that during construction of the LBB, the area between the LBB & GSB will be consumed by the LBB widening and buses will not be able to traverse through the area to gain access to Exit 5 and proceed northbound on the Turnpike. In the event that the GSB is identified for rehabilitation and used by buses during construction, NB access to the Turnpike will need to be provided by the concurrent construction of the Exit 6 Interchange with the GSB rehabilitation. With respect to the local design elements of the Newington alternatives, Bruce stated that local connections should be secondary to addressing the bridge related issues. Chris Cross added that potential property costs associated with the local connections could be significant, depending on location and alignment.

John Scruton asked if the bridges could be extended to the state motor vehicle building located to the north in an attempt to avoid impacting Hilton Park. Chris Waszczuk responded that such a proposal was similar to a double-decker bridge alternative that was dismissed early on due to its extraordinary cost, and its unpleasant and unsightly appearance.

John Scruton commented that the relatively high density of current traffic flows contributed to the potential for fender-bender type accidents, and that response to study area incidents is constrained by the narrowness of the bridges. Bob Landman stated his concurrence with EPA's concern with future peak hour operations at the Dover toll facility. In his view, the toll facility should be part of the study, and that relocation of the toll facility to the Little Bay Bridges would address the issue of toll diversion by area travelers. Chris Waszczuk responded that tolls are a state legislative issue, not a project specific element, and cannot be allowed to handcuff the progress of this important project. VHB has analyzed toll plaza operations and found them to be satisfactory beyond 2025 with implementation of EZ Pass. He added that Frank would address future toll operations later in the meeting agenda.

Bob Landman noted that new park and ride locations, as recommended in the Rationale Report, need to avoid unintended consequences, such as free long term parking at the Portsmouth Transportation Center. It appears to him that some business and vacation travelers are parking at the PTC, taking the C&J bus to Logan International Airport, and traveling for extended periods of time. In his view, there should be no overnight parking at any state funded park and ride facility. Lloyd Melanson inquired as to the study area locations that were monitored for noise. He noted that southbound travel is noisier than northbound travel. Chris Waszczuk responded that study area locations that were measured for noise to construct and calibrate a model for estimating future noise levels are located on a plan contained in the Scoping Report. He asked Marc Laurin, NHDOT to follow-up and provide Mr. Melanson with a copy of the plan. Alice Briggs of Pomeroy Cove stated that she believes that the 2-lane loop ramp alternative for northbound exiting traffic at Exit 6 will be dangerous and noted the recent oil tanker truck that overturned on the existing loop ramp; she prefers the diamond-type interchange, and favors signal operation at the Dover Point Road intersection located to the east of the signalized diamond interchange since vehicles may have difficulty exiting lower Dover Point Road. Rick Everett questioned whether or not the City of Dover owned Hilton Park. He expressed concern with potential impact to Hilton Park and questioned why a connection from the east side of the park to Boston Harbor Road was necessary. Chris Waszczuk responded that Hilton Park is owned by the state (Bureau of Turnpikes), not the city, and that as a 4(f) resource, it is to be protected and, as such, impacts to the park are to be avoided if possible; if impacts are unavoidable they are to be minimized and mitigated. He noted that Exit 5 (the current access and egress to the park) would be discontinued in the future, and that a frontage road adjacent to Pomeroy Cove and connecting to Exit 6 was infeasible due to environmental and property impacts. As such, grade-separated connections under the Turnpike are being pursued as previously described and discussed. Alice Briggs questioned the necessity of providing the northbound on-ramp to the Turnpike at Exit 6. Chris Waszczuk responded that, while the on-ramp volume may be relatively low, constructing the on-ramp provided interchange system integrity at a relatively low cost.

There being no further questions or comments, Frank proceeded to show and describe a series of computer model simulations of 2025 peak hour traffic flow conditions along the Turnpike between Exits 3 and 6 under 6 and 8-lane Turnpike alternatives. This comparison clearly demonstrated the need for an auxiliary lane in each direction, in addition to 3 through lanes in each direction, to be carried between Exits 3 and 6 to accommodate the volume of traffic that enters and exits and changes lanes between Exits 3 and 6. These operations are critical southbound in the 2025 AM peak hour, and northbound in the 2025 PM peak hour. He also simulated and compared the northbound Exit 6 off-ramp 2025 PM peak hour operations under both the signalized-diamond and 2-lane loop ramp alternatives. As he had described previously under the review of Rationale Report review comments,

the diamond interchange off-ramp operations will be more than satisfactory (LOS "C") and the queuing of off-ramp vehicles will be contained to the off-ramp. The 2-lane loop ramp raises safety issues and involves additional bridge related costs ($2M). In light of the peak hour operations under the signalized diamond interchange, Frank referred to the 2-lane loop ramp alternatives as a questionable solution in search of a problem. Frank concluded the review of traffic simulations by focusing on 2025 northbound PM peak hour operations at the Dover Toll plaza. Assuming implementation of the EZ Pass system, he compared operations under both the diamond and 2-lane loop ramp alternatives. Operations under the signalized diamond interchange alternative are satisfactory. However, due to the shorter distance of 4-lane storage between the Toll Plaza and the northbound on-ramp under the 2-lane loop ramp alternative in comparison to the signalized diamond alternative, vehicle queuing under the 2-lane loop ramp is significantly greater and will block the northbound entrance ramp to the Turnpike.

Based on review of the traffic model simulations, there was unanimous consensus on the need for 3 – through lanes and 1 – auxiliary lane in each direction extending between Exits 3 and 6 to safely and efficiently handle the 2025 travel demand. There being no questions or comments, Frank proceeded to discuss the profile of the Little Bay Bridges in the context of design criteria. He referred to a graphic depicting the existing profile of the LBB which corresponds to a 60 MPH design speed, and a 70 MPH design speed profile overlayed on the existing (60 MPH) profile. He noted that the 70 MPH profile provided slightly more stopping sight distance for the driver, and that the grades on the bridge would be approximately 3.3 percent in comparison to the 3.5 percent grades on the 60 MPH profile which corresponds to the existing profile. He stressed that the driver's sight distance associated with 60 MPH is not a safety deficiency, in comparison to the narrow shoulders (2'-0" to 2'-3") on the existing bridges which are safety deficiencies. He noted that the 60 MPH design speed is 10 MPH greater than the 50 MPH posted speed for the bridges and study area, and that the 50 MPH posted speed was appropriate for the study area. The Turnpike study area is a zone of transition where abutting land use is developed, interchange spacing is close, and there are relatively high volumes of traffic entering and exiting the Turnpike and changing lanes. Under these conditions, drivers expect reduced speeds, similar to comparable sections of urban roadways such as I-93 through Manchester and Concord, I-293 in Manchester and I-95 in Portsmouth and Kittery, Maine. The Little Bay Bridge rehabilitation/widening alternatives maintain the 60 MPH design speed profile, address the substandard shoulder deficiencies, improve the traffic weaving conditions which are prevalent on the existing approaches to the bridges, increase capacity on the Turnpike and bridges and have significantly less impacts to Hilton Park and property owners than widening alternatives to the west of the existing LBB that provide a 70 MPH design speed. In response to a question, Frank noted that under current PM peak hour condition, traffic flows freely northbound on the bridge constrained by the narrow shoulders and density of traffic, yet, at the same time, traffic congestion and long delays are prevalent from Exit 1 north to the bridge approach. This congestion and delay are due, not to the profile of the bridge, but due to the lack of auxiliary lanes to accommodate traffic entering, exiting and changing lanes.

Following Frank's presentation, Bob Landman stated that he concurred that the existing bridge profile is not the problem, and that improving traffic operations on the bridge approaches was important. Bruce Woodruff also agreed and said that he was convinced that the existing bridge profile is not a problem. Jack Newick observed that recent accidents southbound in Newington attest to the lack of adequate auxiliary lanes on the bridge approaches. Chris Waszczuk noted that it is NHDOT's position that the existing bridge profile is not a safety issue provided that the shoulder areas are improved and the bridge approaches are addressed as proposed.

There being no further discussion on the bridge profile and design criteria, Frank then addressed the concept of peak hour shoulder use as developed under 6-lane combined options. He noted that the objectives of utilizing a widened shoulder for travel during peak hours are to increase capacity,

minimize environmental and property impacts due to the reduced width of cross-section, and to reduce cost without compromising safety. He explained that inside (median) shoulder use was preferable to outside shoulder use to avoid conflicts between through traffic and traffic entering and exiting the Turnpike at interchange areas, and that outside shoulders are preferred by drivers for emergency stops, and by emergency responders to an incident. Use of the widened shoulder would be unrestricted, i.e., not restricted to HOV's. Frank explained that the ATF had previously expressed support for this 6-lane alternative, particularly in comparison to the borrow lane or zipper lane alternative which requires additional maintenance and operations costs. Recent experience of peak hour shoulder use around the country has been limited to the retrofitting of existing facilities to increase capacity in highly congested corridors. For the most part, these projects have been implemented as interim measures affording time to plan, design, fund and implement more permanent solutions, if feasible. Accident experience has been mixed. In some cases, the frequency of accidents slightly increased following the introduction and operation of peak shoulder use; in other cases, accident frequency actually decreased. Research suggests that proposals for peak hour shoulder use should be reviewed on a case by case basis, and consider such factors as inside vs. outside shoulder lane, length of shoulder use section of highway, width of shoulder and lateral distance between edge of shoulder and median barrier, average volume of peak hour traffic per lane, percentage of truck traffic, HOV vs. unrestricted use of the shoulder area, etc. That being said, FHWA is questioning the viability of peak hour shoulder use as a long term solution, and is currently conducting research and formulating an opinion as to whether or not they can support such an alternative for the long term. Frank concluded by stating that the peak hour shoulder use alternative, described as Option 10 under the 6-lane options and as supported by the ATF, may be infeasible given FHWA's current position.

Discussion then ensued regarding both the 8-lane and 6-lane combination alternatives. From the previous two ATF meetings, 8-lane Option 1 (widen/rehabilitate the LBB; remove GSB; no TDM and no Transit) and Option 4 (New Bridge off line; remove GSB; no TDM and no Transit) had been removed from further consideration. Chris Waszczuk suggested that Option 5 (New Bridge, remove GSB, TDM and Transit) also be removed from further consideration due to impacts, costs, and 4(f) considerations. The greater impacts of the off-line alignment were discussed earlier in the meeting; Chris added that given funding constraints and the fact that the profile of the existing bridge is not a safety deficiency, the NHDOT would not support a new signature bridge in light of additional costs and the prudency – related 4(f) issue of removing the General Sullivan Bridge. The ATF concurred with the dropping of Option 5, and continued discussing the remaining Options and the cost of rehabilitating the GSB. Chris Cross noted that the Department of Historic Resources (DHR) has no funding and is looking to NHDOT to fund the rehabilitation. Chris Waszczuk asked ATF members if they supported the idea of rehabilitating the GSB. He noted that the project team and ATF need to hear more from the communities on the GSB issue. In response to a question, Chris noted that the GSB rehabilitation cost would range from $18M (for pedestrian/bicyclists) to $21M (transit vehicles) and the net additional cost of GSB rehabilitation versus GSB removal and provision of a multi-use path as part of a widened and rehabilitated Little Bay Bridge is approximately $8 - $11M, depending on the loading requirements. Chris added that DHR is on record favoring preservation and rehabilitation of the GSB in place. Chris responded to some additional questions, noting that the multi-use path could not be suspended under a widened and rehabilitated LBB, due to the navigational requirement by the USCG that the existing vertical clearance (52' at mean low tide) above the channel be retained. He noted that lead paint removal is reflected in the GSB rehabilitation costs. Bob Landman noted that there would be future maintenance costs following rehabilitation. Chris concurred, but noted that the maintenance costs would be less if future use is restricted to pedestrians and bicyclists, but that the incremental rehabilitated cost ($3M) for vehicular loads would provide bridge system redundancy which has merit vis-à-vis incident management and future transportation flexibility for the area.

Bruce Woodruff suggested that 8-lane Option 2 (Widen/Rehabilitate LBB, Remove GSB, TDM and Transit) and Option 3 (Widen/Rehabilitate LBB, Rehabilitate GSB, TDM and Transit) and 6-lane Option 10 (Peak Hour Shoulder Use, Widen/Rehabilitate LBB, Rehabilitate GSB, TDM and Transit) be carried forward and the GSB be rehabilitated to carry vehicular loadings. Chris Waszczuk responded that the 6-lane Option 6 (Widen/Rehabilitation LBB, Rehabilitate GSB, TDM and Transit) should also remain from an alternatives evaluation perspective, recognizing that, without auxiliary lanes, Option 6 will not adequately serve the 2025 travel demand. Bruce responded that despite FHWA's reservations, Option 10 should also be retained. Bob Landman suggested that if Option 10 is unacceptable to FHWA, Option 9 (Borrow/Zipper Lane, Widen/Rehabilitation of LBB, Rehabilitation of GSB, TDM and Transit) may be the only 6-lane option that is viable. While the ATF clearly favors Option 10 to Option 9, Frank O'Callaghan suggested that it would be premature, based on the analysis and evaluation to date, to dismiss Option 9. Chris Cross concurred. Chris Waszczuk suggested that the FHWA may also have reservations about Option 9 as a long-term solution, and suggested that FHWA be requested to review both Options 9 and 10. Bob Landman suggested that a video clip of zipper lane operations may be helpful in understanding the operational and maintenance issues related to the borrow lane concept.

Chris Waszczuk, in summarizing, noted that Options 2, 3, 6, 9 and 10 remain on the table, with the ATF awaiting FHWA comments on Options 9 and 10. Chris asked if there was any more public comment. Hearing none, he suggested scheduling public information meetings in each community during the week of May 16th. He questioned whether an Advisory Task Force meeting prior to the Informational meetings was necessary to discuss refinement of the alternatives. It was agreed to hold an ATF meeting on May 4th at the Newington Town Hall. Chris noted that another ATF meeting has been scheduled for June 29, 2005 to discuss the status of the indirect and cumulative impact analysis.

The meeting was adjourned at 9:40 PM.

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE (ATF) MEETING
DOVER CITY HALL
MARCH 30, 2005

Name Maria Stowell
Affiliation Pease Development Authority
Address

Phone /Email /

Name Lloyd Medanson
Affiliation Resident 413 Dover Qt
Address 413 Dover Qt
Also 405 + 411

Phone /Email 603 742-0191

Name ROBERT LANDMAN
Affiliation MPO
Address PO 580
NO. HAMPTON

rlandman@instruments.com
Phone /Email 964-1818/964-1899

Name Bill Oldenburg
Affiliation NHDOT
Address

Phone /Email /

Name JENIFER LANDMAN
Affiliation NO. HAMPTON HERITAGE
Address COMMISSION

jlandman@hlinstruments.com
Phone /Email /

Name MARC LAURIN
Affiliation NHDOT
Address

Phone /Email /

Name Hiroko Sato
Affiliation Foster's Daily Democrat
Address Dover

Phone /Email 742-4455 x5313 hsato@fosters.com

Name DAVID WALKER
Affiliation Rock. Planning Commission
Address 156 WATER STREET
EXETER, NH 03833

Phone /Email 778-0885 / dwalker@rpc-nh.org

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE (ATF) MEETING
DOVER CITY HALL
MARCH 30, 2005

Name JOHN SCRUTON
Affiliation OPEN SPACE
Address 99 SIXTH ST
DOVER NH
Phone /Email 603 742 2371/

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Cross, ATF, RPC
Tom Fargo, SRPC
Steve Parkinson, Portsmouth
Sandy Hislop, Newington
Jack Newick, Dover
Rick Card, Greater Dover Chamber of Commerce
Peter Wellenberger, NHF&G
Bill O'Donnell, FHWA
Maria Stowell, PDA
Chris Waszczuk, NHDOT
Frank O'Callaghan, VHB
Tim Roach, SRPC
Bob Landman, MPO

Date/Time: May 4, 2005

Project No.: 51425.00

Place: Newington Town Hall

Re: Newington-Dover 11238
ATF Meeting No. 12

Notes taken by: Frank O'Callaghan

Chris Cross, ATF Chairman, called the meeting to order at 6:48 pm. He welcomed all and asked members of the ATF in attendance to introduce themselves. Following the self-introductions, Chris noted that the Newington-Dover project addresses a major transportation need of the Seacoast region, and that public input is welcome. He stated that the current Phase 3 of the project is a process of refining alternatives over the next 6 months to identify a preferred alternative for both the Little Bay Bridges and the study area interchanges. Following the environmental impact statement with the necessary approvals, the preferred alternative would be designed, permitted and constructed. Construction is scheduled to begin in 2010; work will begin sooner if additional funding becomes available. Chris then reviewed the meeting protocol: the project team would present information, to be followed by questions and comments from the ATF, to be followed by questions and comments from the public in attendance.

The draft ATF meeting minutes of March 30, 2005, were then reviewed. There were two (2) minor edits noted by Tom Fargo and Frank O'Callaghan, and the draft minutes, as edited, were approved. Chris Cross requested comments from the ATF. There being none, he turned to Chris Waszczuk. Chris Waszczuk welcomed attendees, noting that the ATF has been meeting lately on a monthly basis, reviewing the traffic data, looking more closely at the resources and constraints in the area, and continuing the refinement and development of the infrastructure improvement alternatives being considered for Newington and Dover. Chris referenced the revised Alternatives for Newington (10A and 12A) and Dover (2 and 3), which were displayed on the walls of the meeting room. He noted that additional engineering studies had revised both the horizontal and vertical alignments of the

Turnpike and resultant slope impacts due to preliminary constructability reviews. He also noted that there were Public Informational Meetings scheduled for May 18th in Dover and May 19th in Newington. Chris then asked Frank O'Callaghan to summarize and review the latest modifications to the Exit 3 (Newington) and Exit 6 (Dover) interchange alternatives.

Frank proceeded to describe the most recent modification to Alternative 10, noting that the mainline of the Turnpike had been shifted approximately 80' to the west in order to simplify the construction of the Woodbury Avenue overpass and improve traffic management during construction; the Exit 3 SB on-ramp had been converted from a diamond-type configuration to a loop ramp in order to maximize traffic weaving distance between the Exit 3 on-ramp and the Exit 1 off-ramp; the elevation of the grade-separated railroad R.O.W. and industrial traffic connector to Exit 3 had been lowered by approximately 8 feet which lowered the mainline profile of the Turnpike; and that the limits of slope impacts had been calculated and depicted on the plan. He referred to these revisions as Alternative 10A. Frank then compared the lowered profile of Alternative 10A to Alternative 10.

Frank then described refinements to Alternative 12 noting similarities to Alternative 10A such as the slight horizontal shift in alignment to the west to improve constructability and traffic management at Exit 3, and the depiction of the limits of slope impacts due to construction. He also noted that the grade-separated railroad R.O.W. and industrial traffic connector to Exit 3 had been shifted approximately 900 feet to the north to improve the constructability of the Exit 3 interchange and to avoid an existing utility corridor, paralleling Patterson Lane, and that the roadway connector to the Tradeport had been realigned to avoid the potential prime wetland area located west of Railway Brook. Frank referred to these modifications as Alternative 12A, and compared the mainline Turnpike profiles of Alternatives 12 and 12A, noting that the elevation of the grade-separated railroad R.O.W. and industrial traffic connector had been lowered in Alternative 12A, in similar fashion to Alternative 10A. He noted that the Turnpike, under Alternative 12A, would be approximately 18'-20' above the elevation of the existing NB barrel of the Turnpike at the point where the railroad R.O.W. and industrial traffic connector passed under the Turnpike.

With respect to Alternatives 2 and 3 in Dover, Frank stated that the only refinements pertain to the identification of the limits of potential slope impacts due to construction, and that the Boston Harbor Road/Spur Road intersection had been relocated approximately 150' to the east to increase vehicle storage lanes (Alternative 2) and transition areas for the lane drop, westbound on US 4, prior to the Scammell Bridge. He also reviewed the Turnpike's profile between the Little Bay Bridges and Exit 6. He noted that the Hilton Park Connector was located approximately 1,200' north of the bridges, where the Turnpike would be approximately 18' above the existing elevation of the Turnpike to provide clearance for the Hilton Park Connector below. An alternative location for the connector had been considered adjacent to the channel, but Frank explained that potential impacts to parkland, flood plain issues, and additional cost ($5.5 M) deemed this location infeasible in comparison to the northerly alternative.

At this point, Frank paused for comments and questions. Discussion ensued concerning the local connection between Woodbury Avenue and Nimble Hill Road proposed under Alternatives 10A and 12A. Frank noted that the intent of the connector road was to remove local traffic from using the Turnpike as a connection between Exits 3 and 4, and that the reconfiguration of Exit 3 (Woodbury Avenue) would calm traffic exiting the Turnpike in comparison to the existing free-flow condition for southbound traffic entering Woodbury Avenue. Bob Landman suggested that the reconfigured Exit 3 interchange struck him as being too complex. Tom Fargo stated that ["too much pavement"] there was too much emphasis on the local connections which support local development, which in his view, is not necessarily related to the project purpose and need. Cliff Abbott, Newington resident, questioned the objective of the roads in Newington. Chris Cross responded that the Tradeport connection to Exit 3 and improved access for industrial related traffic to Exit 3 were consistent with

the Town of Newington's transportation planning; he also stated that Newington officials are sensitive to the criticism of some concerning the scale of local connections and have developed some preliminary thoughts on how to reduce the scale of these connections. He indicated that he would share these preliminary thoughts with the project team at the conclusion of the meeting. Chris Waszczuk reminded all that there is currently inadequate spacing between the existing interchanges and that the Tradeport connection to Exit 3 (which will divert traffic from Exit 1 and thereby increase the service life of Exit 1), in conjunction with planning for a future rail connection to the Tradeport (which could divert future trucks from the Turnpike and have a positive impact on air quality) and improved access to the Turnpike for heavy commercial traffic will improve traffic operations and safety conditions within the study area, and as such, are in fact related to the project purpose and need.

Tom Fargo suggested that existing pavement which may be abandoned – depending on the alternative – should be better identified on the plans. He added that potential mitigation areas could also be identified. Bob Landman suggested that the local connection between Nimble Hill Road (Exit 4) and Woodbury Avenue (Exit 3) could be accomplished via the "soon to be" 2-way connection between Nimble Hill Road and River Road traversing under the Turnpike, and then proceeding along Shattuck Way to Piscataqua Drive which intersects with Woodbury Avenue, as opposed to the proposed connection paralleling the western side of the Turnpike. Tom Fargo suggested connecting Fox Point Road to Arboretum Drive and its proposed connection to Exit 3 as another alternative for local connections.

In response to a question of whether or not the lack of capacity on the Little Bay Bridges is the principal traffic problem, Chris Waszczuk responded that, in addition to the lack of capacity on the bridges, the bridge approaches are problematic due to the volume of traffic that is entering and exiting the Turnpike, and the proximity of interchanges to one another which compounds the peak hour problem of traffic changing lanes and entering/exiting the Turnpike within the study area. At the request of the owner of the Mobil/Exxon convenience station, Frank explained how drivers would access his facility from the Turnpike under Alternatives 10A and 12A. Without access from the Turnpike, the property owner stated that his business would be adversely impacted.

Michael Martoni, Coleman Drive, stated that he was concerned about potential noise impacts, and that while acknowledging that access from Nimble Hill Road was treacherous under existing AM peak hour conditions, he saw no need for a west side local connector, as proposed, assuming implementation of the interim safety improvements. Chris Waszczuk noted that noise impacts would be addressed as part of the project.

An attendee suggested that additional access to the Tradeport may be planned to the south of Exit 1 (Pease Boulevard/Gosling Road) which would make the proposed connection to the Tradeport from Exit 3 unnecessary. Frank O'Callaghan responded that he was very familiar with the transportation master plan of the Tradeport, and stated that no such Turnpike access located to the south of Exit 1 is planned. Transportation planning for the Tradeport has always envisioned a potential connection to the north of Exit 1. Steve Parkinson concurred, noting that access via the closed driveway located south of Exit 1 is too close to the I-95 off-ramps and the Portsmouth traffic circle and would be problematic from a traffic operations and safety perspective.

With respect to the proposed location of the Hilton Park connector, Tom Fargo concurred that the floodplain, parkland and cost-related issues make the northerly location preferable to the channel location, as previously described. Responding to a question, Frank noted that the Turnpike at this location would be approximately 18' above the existing elevation of the Turnpike.

Jack Newick stated that wind direction would be critical to the noise analysis, noting sounds carry across the channel depending on the velocity and direction of the wind.

There being no further comment or questions, Frank summarized the advantages of the diamond-type interchange on the northbound barrel of the Turnpike at Exit 6, in comparison to the 2-lane loop ramp suggested by others for consideration. The signalized diamond interchange operates at a satisfactory level of service, will introduce gaps in the overpass traffic stream that will make it easier to exit Dover Pont Road and Spur Road, will save approximately $2M in bridge costs and will provide a potentially safer traffic operation than the free-flowing 2-lane loop ramp alternative.

Cliff Abbott questioned why a signalized diamond type of interchange was proposed instead of perpetuating the free-flowing loop type of configuration that exists today. Chris Waszczuk noted that a traffic simulation depicting both conditions was presented at the previous Advisory Task Force meeting, which showed the signalized diamond interchange operating at a high level of service in the design year (2025). He noted that the simulation would be presented again at the upcoming Informational meetings.

Frank then reviewed the status of 8-lane and 6-lane options. He noted that only two (2) 8-lane options remain, both of which entail rehabilitation and widening of the Little Bay Bridges (LBB) combined with transit and employer-based TDM actions. The only difference between alternatives is whether or not the General Sullivan Bridge (GSB) is rehabilitated (Option 3) or removed (Option 2) and replaced by a multi-use path attached to the LBB. The 6-lane options remaining include the 6-lane typical (Option 6) which entails the rehabilitation/widening of the LBB, rehabilitation of the GSB, transit and employer-based TDM actions. Unfortunately, this 6-lane option does not meet the 2025 travel demand, with system breakdown projected to occur around 2017. In an effort to increase capacity and minimize impacts, the borrow lane or zipper lane (Option 9) and peak hour shoulder use (Option 10) concepts were developed. Similar to Option 6, both the LBB and GSB are rehabilitated and combined with transit and TDM actions. In contrast to Option 6, both provide four (4) travel lanes in the peak direction during the peak hour of traffic. The peak shoulder use has the advantage over the borrow lane concept of having lower operating and maintenance costs. Frank noted, however, that FHWA has reservations about both concepts, and is reluctant to endorse either Option 9 or 10 as a long-term solution. At this point, Frank deferred to Bill O'Donnell. Bill noted that FHWA has just recently drafted comments for submittal to NHDOT, and that in summary, FHWA could not support either the peak hour shoulder use or borrow lane concept. In cases where FHWA has endorsed such concepts, they have been in highly congested corridors, and have been implemented as interim measures to provide time necessary to design, permit, fund and construct long term solutions that meet long-term needs. Bill noted that FHWA has concerns of safety and driver confusion for those not familiar with study area traffic and roadway conditions. He cited traffic accident research studies that noted increases in accidents where shoulders have been employed during peak hours in transitions from 4 to 5 lanes, and lack of research data regarding the transition from 3 to 4 lanes as the study area case would be. He further noted that while 6-lanes (Option 6) fails from a 2025 traffic operations performance perspective, and that 8-lanes (Options 2 and 3) provide a satisfactory level of 2025 traffic service, there is not much difference in roadway and bridge footprints (from an impacts perspective) between the 6- and 8-lane options. As such, FHWA will not support either Option 9 or Option 10.

Bob Landman commented that West Coast facilities don't provide shoulders in some cases, and in others, provide very narrow shoulders. Bill replied that those are examples of interim retrofits of existing facilities, not the design and construction of a new facility with built-in deficiencies or design exceptions. Bob noted the sensitive environmental condition of the study area suggesting special consideration may be warranted. Bill responded that we should not be satisfied with built-in deficiencies. Bob inquired as to the possibility of utilizing a moveable center median, in a

borrow/zipper lane fashion. Chris Waszczuk replied that the Exit 3 and Exit 6 bridges that traverse the Turnpike require center piers for support which preclude the possibility of moving a single center median from one side of the Turnpike to the other.

Tom Fargo noted that 8-lanes will be adequate for the future given the regional demographics and the origins and destinations of travel. Gail Pare asked if 8-lanes would be required throughout the study area. Frank O'Callaghan responded that 8-lanes would be required between Exits 3 and 6, and that the 4th lane in each direction was an auxiliary or traffic management lane connecting the on and off-ramp lanes at each interchange. Gail suggested that an aerial photograph or plan view of 6- and 8-lane bridge alternatives would help her and probably others visualize the difference in scale between 6- and 8-lanes. Chris Waszczuk replied that a rendering would be developed as concepts are further developed. Bob Landman stated that he was comfortable with 6-lanes, but not yet supportive of 8-lanes. Gail Pare raised the issue of HOT lanes. Chris Waszczuk responded that such a concept would be inefficient in our compact study area, and would require a radical change in travel behavior. Chris Cross noted that 8 lanes is not excessive in his view, particularly in light of the continued attractiveness and growth of the Seacoast area.

Tom Fargo observed that current traffic patterns reflect regional employment and housing patterns, to wit, that lack of housing opportunities south of the LBB result in many residents residing north of the LBB and commuting south of the bridge to work. Such commuting patterns limit the flexibility for TDM actions such as ridesharing and variable work hours due to family commitments such as day care and school drop-offs. Bob Landman opined that we should learn from metropolitan areas, such as Denver, Colorado, where transit has been integrated into the mainstream of daily activities; as such, NH should invest more in transit. Bill O'Donnell replied that the FHWA supports buses and transit as part of comprehensive transportation solutions, such as the improvements recommended for the I-93 corridor. Bob responded that such investments should not benefit private enterprise, such as allowing free overnight parking at the Portsmouth Transportation Center (PTC) which, in his view, amounts to a subsidization of C&J service to Boston and Logan International Airport.

At this point, Chris Cross asked for any final comments from the ATF. Sandy Hislop stated that Newington residents prefer provision of an off-ramp to Nimble Hill Road, and that 8-lanes is preferable to 6-lanes given the future travel demand. Rick Card concurred with respect to the 8-lane options, noting that there are few alternate travel routes to the Turnpike, which explains the heavy travel demand; he also noted that tourist traffic is largely unfamiliar with the area.

Chris Cross thanked all for their interest and comments, which the project team will consider. He noted that Public Information Meetings are scheduled for May 18, 2005, in Dover and May 19, 2005, in Newington. At these meetings, a project overview, and summary of project status will be presented, and additional input solicited. He reminded all that the objective of the study is to reach consensus on a smart and comprehensive transportation solution for the study area. Chris Waszczuk noted that the latest refinements to Alternatives – 10A, 12A, 2 and 3 – would be posted on the project website as soon as possible, and that the traffic model simulations and level of service videos would be available at the Public Information Meeting.

The meeting adjourned at 9:12 PM.

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE (ATF) MEETING
NEWINGTON TOWN HALL
MAY 4, 2005

Name Gail Page
Affiliation ~~Newington~~ Newington HDC
Address 188 Little Bay Rd
Newington

Phone /Email _____ / _____

Name Vincent Frank
Affiliation Newington Planning Board
Address 19 Fox Point Rd
Newington

Phone /Email 603-436-8380

Name Joe Mitchell
Affiliation NEWINGTON EXXON
Address 58 Fox Point Rd
Newington NH

Phone /Email _____ / _____

Name _____
Affiliation _____
Address _____

Phone /Email _____ / _____

Name Michael MARCONI
Affiliation Abbutter
Address 19 Coleman Dr
Newington

Phone /Email 603-431-2602 / JMMARCONI@comcast.net

Name _____
Affiliation _____
Address _____

Phone /Email _____ / _____

Name Clifford N. ABBOTT
Affiliation 8 HANNAH LANE
Address Newington

Phone /Email SKip28408@hotmail.com

Name _____
Affiliation _____
Address _____

Phone /Email _____ / _____

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE (ATF) MEETING
NEWINGTON TOWN HALL
MAY 4, 2005

Name Maria Stowell
Affiliation PDA
Address _____
_____
_____
_____
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email_____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email_____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email_____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email_____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email_____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email_____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email_____/_____

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Cross, ATF Chair, RPC
Tom Fargo, SRPC
Steve Parkinson, Portsmouth
Jack Newick, Dover
Sandy Hislop, Newington
Bruce Woodruff, Dover
Maria Stowell, PDA
Bill O'Donnell, FHWA
Chris Waszczuk, NHDOT
Marc Laurin, NHDOT
Mike Dugas, NHDOT
Tim Roache, SRPC
Tom Wholley, VHB
Frank O'Callaghan, VHB

Date/Time: July 6, 2005

Project No.: 51425

Place: Newington Town Hall

Re: Newington-Dover 11238
ATF Meeting No. 13

Notes taken by: Frank O'Callaghan

Cosmos Iocovozzi, Chairman of the Newington Board of Selectmen, called the meeting to order at 6:30 pm. On behalf of the Town of Newington, he thanked the NHDOT for convening the ATF meeting in Newington to hear directly from Newington officials and residents on the development and modifications of Newington project alternatives. He noted that representatives of Newington's Board of Selectmen, Planning Board and Conservation Commission were in attendance in addition to Town residents. He asked for comments or questions from Town officials. Hearing none, he stated that Town officials would likely comment following the project team's presentation. At this point, Chris Cross, ATF Chairman, welcomed all. He noted the importance of the project, and the importance of the input from Newington officials and residents that the project team was seeking. He stated that the Draft EIS was scheduled for completion at the end of 2005.

Chris Cross then referred to the draft ATF meeting minutes of May 4, 2005 and asked if any member of the ATF had questions or comments. There being no questions or comments, the Draft meeting minutes were approved. Following self introductions by the ATF members, Chris requested comments from the ATF. There being none, he turned to Chris Waszczuk. Chris welcomed all and thanked the Newington Selectmen for inviting the project team to present the latest project information and for the opportunity to listen and respond to the concerns, comments and questions of Newington officials and residents. Chris stated that the project is presently in the middle of Phase 3, where the Alternatives are being engineered, refined, and impacts assessed with the intent to identify a preferred alternative prior to the Draft EIS being completed and published. He noted that the project team has attempted to be open to local input, and has modified the Newington alternatives (Alternatives 10A & 12A) based on local input submitted at the May 4, 2005 ATF meeting.

He noted that the project team has reviewed the Town's concept (Alternative 13) and is prepared to discuss merits of the new alternative. He also noted that it is apparent through the course of the Feasibility Study and the earlier phases of the current study (Phases 1 & 2) that some of the original Town priorities have changed. Chris expressed hope that following this evening's meeting, some clear and consistent direction could be provided regarding the Newington Alternatives to allow the project to continue its progression towards the completion of the DEIS and the scheduling of a formal Public Hearing next Spring. He then reviewed the meeting agenda and turned to Frank O'Callaghan to summarize feedback from the Public Informational Meetings of May 18 and 19, 2005.

Frank summarized feedback from the public informational meetings under several broad categories. He noted that Modifications to the Newington Alternatives (Alternatives 10A and 12A) would be discussed in detail later in the presentation, and that such discussion would include review of a Town-generated alternative (Alternative 13). Noise comments pertained to analysis methodologies, assumptions and time periods; abatement criteria; potential mitigation areas; and the design and effectiveness of noise barriers. Several aspects of the General Sullivan Bridge were noted: historical significance, reuse alternatives, cost of rehabilitation, alternative to rehabilitation, and state and federal requirements to assess practical and prudent alternatives to impacting the historical resource. A number of traffic operational questions/issues were noted: Can Exit 4, northbound be eliminated? (No); can Exit 5 be retained? (No); the signalized-diamond interchange advantages over a two-lane loop ramp operation at Exit 6 northbound; the lack of a practical 6-lane alternative, in combination with expanded transit and employer-based TDM, that adequately meets 2025 travel demands; Tradeport and Portsmouth Naval Shipyard traffic impacts on the Turnpike; signal operations at the Spur Road/Boston Harbor Road intersection; incident management improvements under design or implementation; and efforts to minimize potential impacts to the Beane Farm property located on Woodbury Avenue. With respect to the Beane Farm property, Peggy Lamson, Conservation Commission chair and Planning Board member, expressed concern over the potential impact to one or both trees that abut Woodbury Avenue on the Beane Farm property. Frank responded that the proposed cross section on Woodbury Avenue has been reduced to the extent practicable in an effort to minimize impacts to the Beane Farm and the Isaac Dow House. While impacts to both structures have been avoided, one or both trees abutting Woodbury Avenue on the Beane Farm property may be impacted.

With respect to rail, Frank stated that there was support for expanding the Downeaster service during the peak commuting periods, and that the idea of creating new passenger service between Rochester and Portsmouth, running parallel to the Turnpike, was impractical due to low ridership estimates, high capital cost, and lack of right-of-way. Lastly, Frank took note of a number of miscellaneous items, including the Turnpike profile under various alternatives, the impacts of reconstructed bridge piers on channel currents, maintenance of traffic during construction, base mapping updates and representation of Newington's input to the planning process.

Frank then proceeded to describe the recent modifications to the Newington Alternatives 10A, 12A and 13. He began by noting several issues pertinent to the Newington alternatives which were raised during the recent public informational meetings: desire for a direct southbound off-ramp connection from the Turnpike to Nimble Hill Road, better access to the Exxon-Mobil convenience store, simpler local connections and less length of new local roadway connections. He then described the modifications to Alternatives 10A and 12A which include a direct off-ramp connection from the Turnpike to Nimble Hill Road, and the relocation of the Exit 3 (Woodbury Avenue)/Nimble Hill Road connector from an alignment paralleling the Pease Spur railroad to an alignment paralleling the Turnpike along the to be abandoned existing southbound barrel of the Turnpike. Access to the Exxon-Mobile station would be via the connector road. Frank reviewed site access routing from the Turnpike via Nimble Hill Road and the connector road, and from Newington village via Nimble Hill Road and the connector road. He also reviewed the Turnpike profiles extending from Exit 1 at Gosling Road north to the Little Bay bridges under both modified Alternatives 10A and 12A,

comparing the existing Turnpike elevation above Gosling Road to the proposed Turnpike elevation needed to clear the industrial connector road and the railroad right-of-way.

Frank next described Alternative 13 which was developed and proposed by Town of Newington officials. The concept entails both on and off-ramps to the Turnpike from Nimble Hill Road, a reconfigured Exit 3 interchange that maintains the Tradeport connection, eliminates the local connector between Nimble Hill Road and Exit 3/Woodbury Avenue [This connection would be provided via the Nimble Hill Road – River Road connection, currently under construction, and include connecting to Woodbury Avenue via Shattuck Way and Piscataqua Drive.], and provides for the future railroad R.O.W. connection to the Tradeport by carrying the railroad spur track over the Turnpike. This would allow the profile of the Turnpike to remain at its approximate existing elevation and avoid the need to elevate the Turnpike as in Alternatives 10A and 12A. Access to the Exxon-Mobil facility would be from a cul-de-sac forming the fourth leg of the intersection of Nimble Hill Road, the southbound ramps, and Shattuck Way extension. Frank noted that the original concept developed by the Town included an industrial traffic connector paralleling Patterson Lane, to provide a direct connection between Shattuck Way and Woodbury Avenue. The connector was envisioned to form the fifth leg of the at-grade signalized intersection of Woodbury Avenue and the northbound ramps. However, Frank explained that operation of such an at-grade intersection would require a 7-lane cross section on Woodbury Avenue and adversely impact the Isaac Dow House and Beane Farm. As such, the at-grade industrial connector was deemed infeasible and eliminated from the concept. Frank also noted that the Nimble Hill Road southbound off and on-ramps to the Turnpike were originally located just to the south of the Exxon-Mobil facility. VHB has proposed a modification that would locate these ramps to the north of the Exxon-Mobil facility in close proximity to the existing Nimble Hill Road. Such a modification would retain the same level of access to the Exxon-Mobil facility as originally proposed by the Town's concept, but could have less impact on abutting property, increase the distance between Exits 3 and 4 which would improve traffic operations, and would offer future flexibility to access potential future development of the former drive-in site. He concluded by reviewing the profiles of the Turnpike and the Pease Spur track.

Denis Hebert, Newington Planning Board, stated that Alternative 13 had several advantages in comparison to the modified Alternatives 10A and 12A – Alternative 13 has less local roadway construction, the elevation of the Turnpike was lower, and it was less costly (by approximately $2 - $3M). He inquired as to the ownership of the railroad ROW, and responsibility for future maintenance. Chris Waszczuk responded that the railroad ROW is owned by the PDA, and that the NHDOT is researching access and ROW related issues. Chris added that preserving the future railroad ROW is consistent with the updated Pease Surface Transportation Master Plan and Development Plan, and the NHDOT is open to planning for the future rail connection to the Tradeport either above or below the Turnpike. Denis responded that the cost difference between running the rail ROW over the Turnpike or under the Turnpike is relatively small ($2 - $3M) given the total cost of the Newington-Dover project; he stated that the major issue is use – will the rail service ever be reactivated? He questioned the risk of raising the Turnpike [and providing the rail connection under the Turnpike] and fracturing the Town for a railroad connection that may never be used. As such, he stated his preference for keeping the Turnpike at-grade, reducing the cost of the project, and for the State, the PDA and others to provide the rail connection above the Turnpike at a future time.

Jack Pare, 188 Little Bay Road, Newington, noting the planning horizon of 2025 for the project, asked if there was any sense of a rail use need prior to 2025. Maria Stowell, PDA, responded that a recent proposal by an airplane manufacturer would have required rail access. Rail service could be required during the next 10 or 20 years. She added that an active rail connection would remove trucks from the Turnpike and be consistent with the Pease Development Plan which has been approved by the Legislature. Maria noted that the rail corridor should be preserved, that easements have been conveyed to the PDA, and that any proposal to alter those easements, or relinquish the ROW would

rest with the PDA Board of Directors. She also added that since Pease's Development Plan was approved by the Legislature, legislative action may be necessary. Jack Pare then suggested that, the rail ROW connection should be preserved, in his view, by planning for the rail to go over the Turnpike.

A resident asked if the future rail corridor would be built as part of the Newington-Dover project. Chris Waszczuk responded that it would not be constructed as part of the project. He noted that the original concepts (Alternatives 10A and 12A) provided a bridge carrying Turnpike traffic over the railroad ROW, and that the recently developed concept (Alternative 13) eliminates the industrial traffic connector and provides for a future railroad bridge over the Turnpike for a railroad ROW. Rick Stern, 1223 Spaulding Turnpike, Newington, inquired as to the origin and destination of the future rail connection. Maria Stowell responded that the rail connection would run from the Portsmouth Yard, north on the Newington Branch, and then traverse westerly across the Spaulding Turnpike to connect with the Tradeport. Chris Cross added that the Portsmouth Branch Line that runs easterly through Greenland, and traverses NH 33 and connects to the Portsmouth Yard from the south does not have easements in place to access the Tradeport, as compared to the Pease Spur, which has a perpetual easement to cross the Turnpike. Tom Fargo suggested consideration of focusing on accessing the Tradeport from the south (vicinity of NH 33) and acquiring the necessary easements. Chris Waszczuk responded that the PDA could independently pursue rail access from the south along the NH 33 corridor, but the focus of the Newington-Dover project should be on the Spaulding Turnpike within the study area, which entails dealing with the railroad easements across the Turnpike.. Gail Pare, 188 Little Bay Road, Newington, expressed support for Alternative 13 and the railroad ROW traversing above the Turnpike. She said that it made more sense to her to keep the Turnpike at-grade and to plan for and deal with the railroad ROW in the future. She asked if the PDA would entertain the concept of connecting the rail ROW above the Turnpike as proposed in Alternative 13. Maria Stowell replied that the PDA Board of Directors would need to respond to that plan (Alternative 13). Tom Fargo concluded comments on the rail ROW related issues by stating that the easements and access issues would likely require additional research and legal interpretation and opinion.

At this point Frank turned to Tom Wholley, an acoustical engineer at VHB, to discuss the preliminary noise analysis. Tom explained that the noise analysis was a work in progress and that preliminary analyses of both existing and future conditions have been conducted adhering to NHDOT procedures which are consistent with FHWA procedures. Existing conditions were modeled and calibrated by utilizing an FHWA model that reflects local topographic, traffic and roadway features and conditions. The hour with the highest level of noise was analyzed, and future conditions reflected the peak hour 2025 traffic volume estimates. Tom made note of two (2) criteria for identifying noise abatement requirements – a significant increase in noise, defined as 15 dBA or greater, or a 67 dBA level of noise for residential areas. Tom referred to several graphics which depicted noise impact areas within the study area. He identified three (3) areas in Newington and five (5) areas in Dover where existing sound levels equal or exceed the 67 dBA noise criteria threshold. Construction of the Turnpike improvements – assuming 8-lanes under Alternatives 10A (Newington) and 3 (Dover) – result in noise levels in the aforementioned areas that would increase, at projected 2025 traffic volume levels, in the range of 1 to 4 dBA, depending on location. Tom explained that the project related impacts are considerably less than the NHDOT 15dBA threshold for identifying a substantial noise increase, and that no new areas are created where sound levels exceed the noise abatement criteria. He then referred to graphics which depicted 60dBA and 66dBA noise contours within the study area, and noted locations where potential noise abatement may be considered. These locations are existing areas that exceed 66dBA noise levels, and where existing noise levels would increase by approximately 1 to 4 dBA under future conditions. He noted that design of potential noise abatement in these areas would be assessed and would consider such factors as location, land use, and cost.

Gordon Smith, 14 Boston Harbor Road, Dover stated that the acceleration of trucks from a stop at the Boston Harbor Road/US 4 signalized intersection was very noisy and annoying. He mentioned that he had previously complained to NHDOT about noise following the completion of the Scammell Bridge reconstruction project. Chris Waszczuk offered to conduct a noise measurement at his residence to verify calibration of the noise model and accuracy of noise levels. Tom Wholley added that the model can be adjusted to reflect the affects of gear shifting due to the starting and stopping of trucks. In response to a question from a resident, Tom stated that the NHDOT noise abatement guidance allows a degree of discretion with respect to methods of noise abatement. Denis Hebert asked if a decrease in noise of 10dBA actually constituted a 50 percent reduction in noise level. Tom confirmed that it did, noting the logarithmic function of noise measurements. Denis also asked for confirmation that the future condition analysis assumed an elevated profile of the Turnpike. Tom confirmed that an elevated profile was assumed. Tom Fargo inquired about the noise reduction effects of "quite pavement". Tom Wholley responded that the FHWA model allows a "quiet pavement" assessment, but noted that over time, the pavement wears and the noise level would increase. Pavement reconstruction with "quiet" materials could help abate noise in the short term. Tom Fargo noted that the Massachusetts Highway Department was currently utilizing "quiet pavement" on the reconstruction of I-95 from the NH state line south. Tom Wholley noted that the current preliminary analysis of future conditions does not reflect the benefit of "quiet pavement", thus is a conservative assessment.

Gail Pare questioned whether or not the village center area of Newington should be held to a higher noise standard than residential. Tom responded that in such a case, the 15dBA increase in noise level would be the appropriate criteria, and that noise increases are expected to be in the 1 to 4 dBA range. Barbara McDonald, 415 Newington Road, Newington inquired as to the specific noise abatement mitigation that was being proposed. Chris Waszczuk responded that a preferred alternative needs to be selected prior to the design and location of specific noise abatement measures, and that selection of a preferred alternative was approximately 3-6 months away. Barbara expressed frustration, stating that it appeared to her that there was nothing new in information that was being presented during this evening's meeting. To the contrary, Chris replied that Alternatives 10A and 12A had been modified based on recent feedback from the ATF and public, and that Alternative 13 was a totally new concept originating from Newington Town officials and being presented for the first time at tonight's ATF meeting.

At this point, Frank O'Callaghan directed attention to a plan of Alternative 13 posted on a wall, and discussed the travel patterns and traffic operational characteristics of this concept, including access and egress from the Exxon-Mobil facility. Discussion ensued on the access to the Exxon-Mobil facility. Frank pointed out that site access, as proposed, attempts to strike a balance between traffic operational and safety concerns, and convenience to facility patrons. He noted that NHDOT and FHWA would not support perpetuating direct access to the site from the Nimble Hill Road on and off-ramps due to safety concerns.

Michael Marconi, 19 Coleman Drive, Newington, voiced support for Alternative 13. Peggy Lamson identified roadway drainage as an important design issue. Chris Waszczuk concurred and noted that water quality is a major study area concern. Gordon Smith noted a drainage concern located at the Boston Harbor Road/US 4 intersection. Chris Waszczuk responded that Best Management Practices for drainage would be reflected in final design of the preferred alternative.

At this point, Chris Cross solicited input from Newington town officials and residents in the formulation of a Newington position on project alternatives and issues. Gail Pare noted she assumed NHDOT would be responsible for maintenance (e.g. snow plowing) of the Nimble Hill Road ramps running between the Turnpike and the proposed 4-way intersection of the ramps/Shattuck Way extension/Nimble Hill Road/proposed cul-de-sac (Alternative 13); and that once a preferred

alternative is selected, the edges of the widened Turnpike should be landscaped with mature trees as opposed to seedlings. John Grohl, 272 Nimble Hill Road, Newington, reflected on the discussion of traffic operations and safety concerns relative to Nimble Hill Road under Alternative 13 and concurred with the project team that direct access from Nimble Hill Road to the Exxon-Mobil facility could be problematic in the future. Chris Waszczuk noted the need to begin finalizing the concepts based on the traffic projections and analysis conducted. Lorraine Cole, Coleman Drive, Newington, expressed concern for the potential economic impact to the owner of the Exxon-Mobil facility under the site access proposed as part of Alternative 13. Chris Waszczuk responded that site access, as proposed, is both visible and convenient to both Turnpike traffic and Newington residents, noting the change in access relates to safety concerns for both Newington residents and travelers on the Turnpike. Denis Hebert stated that safety is the priority vis-à-vis impacts on Nimble Hill Road, and that Alternative 13 is the best plan possible. Ann Stewart, Newington Selectman, concurred with Denis Hebert, noting that Alternative 13 best addresses the Town's concerns of safety, noise and access to the Turnpike from Nimble Hill Road. Sandy Hislop, Newington Planning Board, also expressed support for Alternative 13, noting that the lack of a direct industrial traffic connector to Exit 3 would be compensated by the Town's project to extend Shattuck Way to Gosling Road. Michael Marconi stated that Alternative 13 was a big improvement in comparison to other alternatives.

Assuming Alternative 13, Denis Hebert suggested a re-examination of the Turnpike profile in hopes of lowering it in the vicinity of Exit 3. Jack Pare concurred and suggested lowering the Turnpike profile to the extent possible to reduce the extent of the future rail elevation. Michael Marconi inquired if lowering the Turnpike profile would benefit noise abatement. Tom Wholley responded in the affirmative. Denis Hebert suggested that blinders attached to the bridge rails of the Little Bay Bridges would minimize driver distraction and increase traffic flow efficiency and safety.

At this point Chris Cross thanked all for attending and for their input, and thanked NHDOT and the project team for listening. Chris Waszczuk suggested that Town officials should submit a letter to the NHDOT affirming the Town's support for Alternative 13 which was expressed at tonight's meeting. He added that Alternatives 10A, 12A and 13 would be advanced through the Phase 3 DEIS process. Jack Pare asked if Alternatives 10A and 12A would be modified to reflect the railroad ROW traversing over the Turnpike. Chris responded that Alternatives 10A and 12A would remain as is, i.e. with the Railroad ROW traversing under the Turnpike. Denis Hebert offered that the noise mitigation resulting from the lowering of the Turnpike's profile under Alternative 13 was a reasonable trade off for the lack of a direct industrial traffic connector to Exit 3. Chris Cross noted that the development and refinement of alternatives has been an incremental process with both the Town and NHDOT willing to compromise where possible. Gail Pare expressed her appreciation for the ATF and NHDOT's willingness to listen and work with the community.

Chris Waszczuk noted that the City of Dover has requested rescheduling of the next ATF meeting from August 31st to August 24th, at Dover City Hall. Chris Cross closed the meeting by stating that Newington officials would submit a letter of consensus, support and rationale for a preferred Newington alternative within the next two weeks.

The meeting adjourned at 9:15 PM.

cc: J. Brillhart, H. Goodwin, M. Richardson, W. Hauser, W. Oldenburg
F. O'Callaghan (VHB), ATF Committee, Newington Selectboard

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE (ATF) MEETING
NEWINGTON TOWN HALL
JULY 6, 2005

Name JAN STUART
Affiliation Selectman
Address TOWN HALL
Phone /Email 436-7640 /

Name Jack O'Reilly
Affiliation Selectman
Address Town Hall
Phone /Email 436-7640 /

Name Peggy Lamson
Affiliation Conservation Comm. Town Newington
Address
Phone /Email 436-7640 /

Name Lorraine Cole / Skip Cole
Affiliation Resident
Address Coleman Dr.
Phone /Email 436-5237 /

Name Suzanne Russell
Affiliation resident
Address 56 Nimble Hill Rd. Newington
Phone /Email (603) 436 3132

Name Michael Marconi
Affiliation Abutter
Address 19 Coleman Dr
Phone /Email 431 / 2622

Name Joe Mitchell
Affiliation Newington Exxon
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE (ATF) MEETING
NEWINGTON TOWN HALL
JULY 6, 2005

Name Tim Roache
Affiliation SRPC
Address

Phone /Email 742-2523 / TRoache@strafford.org

Name Barbara Medaglia
Affiliation Conservation Com.
Address 415 Newington Rd
Newington NH

Phone /Email /

Name Rick Stern
Affiliation Newington resident
Address 1223 Spaulding Tpke
Newington NH 03801

Phone /Email 431-9741 / DOT25@aol.com

Name
Affiliation
Address

Phone /Email /

Name Art + John Pelletier
Affiliation Dover resident
Address 44 Buck River Rd
Dover NH 03820

Phone /Email 742-1802 / art.pell27@ne.rr.com

Name
Affiliation
Address

Phone /Email /

Name VINCENT FRANK
Affiliation Planning Board Newington
Address 18 - Fox Point Rd
NEWINGTON N.H.

Phone /Email 603-431-8380

Name
Affiliation
Address

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE (ATF) MEETING
NEWINGTON TOWN HALL
JULY 6, 2005

Name Beatrice Marconi
Affiliation Town Employee - Newington
Address 205 Nimble Hill
Newington
Phone /Email 431-7640 /

Name Pat McGowan
Affiliation Fosters
Address
Phone /Email /

Name Keith Frizzell
Affiliation
Address 24 Fox Point Rd.
Newington
Phone /Email /

Name John Krinit
Affiliation Newington Planning Bd
Address 272 Nimble Hill Rd
Newington NH
03801
Phone /Email /

Name Chris Bellmare
Affiliation
Address 168 Little Bay rd.
Newington
Phone /Email /

Name Tom Morgan, Town Planner
Affiliation Town of Newington
Address
Phone /Email /

Name Christa Bellmare
Affiliation Newington resident
Address 168 Little Bay Rd
Newington
Phone /Email /

Name
Affiliation
Address
Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE (ATF) MEETING
NEWINGTON TOWN HALL
JULY 6, 2005

Name RICK + MARY HOBBARD
Affiliation
Address 97 SPRUCE LANE
DOVER

Phone /Email 742-0975

Name Jan MacMillan / Gordon Smith
Affiliation
Address 14 Boston Harbor Rd
Dover Pt.

Phone /Email 742-5508 /

Name Gail Pare
Affiliation Newington HDC
Address 188 Little Bay Rd
Newington

Phone /Email 603-436-6415

Name Jack Pare
Affiliation Newington Planning Board
Address 188 Little Bay Rd
Newington, NH 03801

Phone /Email 603/436-6415

Name J. NOSEWORTHY
Affiliation
Address 120 Nimble Hill Rd.
Newington N.H. 03801

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Transportation
Land Development
Environmental
Services

VHB *Vanasse Hangen Brustlin, Inc.*

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Cross, ATF Chair, RPC
Steve Parkinson, Portsmouth
Rick Card, Greater Dover Chamber of Commerce
Bruce Woodruff, Dover
Leon Kenison, PDA
Tom Fargo, SRPC
Jack Newick, Dover
Sandy Hislop, Newington
Bill O'Donnell, FHWA
Chris Waszczuk, NHDOT
Marc Laurin, NHDOT
Mike Dugas, NHDOT
Tim Roache, SRPC
David Walker, RPC
Jim Hicks, RKG Associates
Pete Walker, VHB
Jake Tinus, VHB
Frank O'Callaghan, VHB

Date/Time: August 24, 2005 / 6:30 PM

Project No.: 5142500

Place: Dover City Hall

Re: Newington-Dover 11238
ATF Meeting No. 14

Notes taken by: Frank O'Callaghan
Jake Tinus

Chris Cross called the meeting to order at 6:38 pm. He welcomed all, introduced the ATF members and described the ATF's role in reviewing the Spaulding Turnpike Improvement Project. Chris then described the status of the project, indicating that this is the 14th ATF meeting to be held. He indicated that information pertaining to the project is available on the website: www.newington-dover.com. Chris then referred to the draft July 6, 2005 ATF meeting minutes and asked the ATF members if they had any notations aside from the spelling of a Newington selectman's name, which was corrected. A motion was made, and seconded, to accept the minutes as amended. Chris then took the opportunity to compliment VHB for their role as consulting engineers on the project. He also complimented Frank O'Callaghan for a job well done on meeting minutes; he stated that Newington officials noted the thoroughness and accuracy of the information contained in the public record.

Chris Waszczuk then shared the contents of a letter dated July 26, 2005 from the Town of Newington and read the letter for the record. The letter indicates that the elevation of the Turnpike is of greatest concern to the Town and Alternative 13, which proposes a depressed Turnpike is preferred over Alternatives 10A and 12A as Alternatives 10A and 12A would elevate the Turnpike and result in substantially more noise impacts to Town residents. The letter also requests that concepts for an

elevated turnpike are rejected. Chris asked that the letter be officially added to the minutes, but expressed concern that Alternative 13 was not specifically noted as the preferred alternative by the Town. He also noted that the preliminary noise studies completed to date do not show a severe noise impact to the Newington residential area with either alternative. He expressed hope, as Phase 3 was nearing completion, that a preferred alternative would be identified, and that the City of Dover officials would provide a clear expression of either their support for a preferred alternative or clear direction for the project.

Bill O'Donnell pointed out that he too thought that the last paragraph of the Town of Newington's letter was not specific enough to demonstrate Newington's support for Alternative 13. Chris Cross agreed that the Town of Newington appeared to have taken a "light approach" to the letter and noted that the Town views Alternative 13 as the most viable configuration. Chris explained that Newington's biggest concern appears to be potential noise from the highway. In his view, Town officials desire the lowest noise level at the least project cost. He stated that he has asked selectmen for clarification and an endorsement of a preferred alternative in Newington. Regarding the letter from Newington, Chris Waszczuk asked if there were any additional questions or comments from the ATF. There being none, Chris reviewed the meeting agenda which includes a discussion of indirect and cumulative impacts, a review of the Dover alternatives, and a summary of impacts to wetlands and potential mitigation for the project.

Jim Hicks, RKG Associates, introduced himself and explained that RKG's role was to provide an assessment of the various social and economic factors that are being considered in the impact analysis *vis-à-vis* the Environmental Impact Statement being prepared for the project. He continued that he was going to explain the preliminary direct, indirect and cumulative socio-economic impacts to the project. He noted that ***Direct Impacts*** are caused by the proposed action, or project, and occur at the same time and place. ***Indirect Impacts*** are caused by the project and are later in time or further removed in distance, but are still reasonably foreseeable. ***Cumulative Impacts*** result from incremental impact of the project when added to other past, present and reasonably foreseeable future actions regardless of what agency or persons undertake such action. Jim went on to explain the methodology used to analyze social and economic trends of the study area, which includes Strafford county and portions of Rockingham and Carroll counties. As such, the data that he would refer to was adjusted to reflect these geophysical and demographic realities.

Jim reviewed his methodology. Following the identification of the 33-community study area, social and economic trends were evaluated and complemented by utilizing the regional economic and policy model (REMI) to forecast key economic changes. Additional project changes related to 6 and 8-lane bridge/highway widening alternatives were also estimated by utilization of the REMI TranSight model, which links transportation improvements and economic output.

Jim summarized the key social and economic trends occurring in the study area. These trends include substantial growth in housing over the past 20 to 30 years, with a decline in the rate of growth during the 1990's. In Strafford County, population growth exceeded that in Rockingham. Overall, the study area is projected to experience approximately 28% growth between 2000 and 2025. The average number of residential building permits was approximately 1,400 between 1985 and 2002, with approximately 1 permit in 5 involving multi-family dwelling units. Average housing prices were lower in Strafford County than in Rockingham County between 1992 and 2002. Jim also pointed out that employment in the area showed a 27% increase from 1993 to 2001, and that about 74% of workers that live in the study area are employed in the study area. The analysis also shows that Strafford County saw a 20% increase in the number of residents that work outside the county. In

Rockingham County, about 65% of the workers that commute work in Rockingham County, with only 6% traveling to Strafford County for work.

Regarding direct socio-economic impacts from the project, Jim explained that only two or three properties, depending on the combination of project alternatives that are chosen, would be impacted. He also pointed out that the various alternatives result in a reduction in property tax revenue of less than 1% in both Dover and Newington.

With respect to indirect impacts, Jim explained that the evaluation process includes first developing a base model reflecting a "no build" scenario. From this, the socio-economic effects of various build alternatives are developed. Specifically, Jim mentioned that each of the three alternatives in Newington could improve access to the Pease International Tradeport and a 16-acre parcel (the former drive-in theatre site) in Newington. He further stated that minimal impacts are expected to existing businesses other than at the ExxonMobil service station at Nimble Hill Road. However, providing limited or full access to the Turnpike from Nimble Hill Road may minimize this impact. Positive impacts related to increasing connectivity between certain neighborhoods in Newington and Dover was also noted.

Jim then presented a series of tables showing 2005 statistics on population, employment, economic output and disposable income in Strafford and Rockingham counties and projecting (2025) how they would change over time. For example, population growth in Strafford and Rockingham counties is projected to grow by 22,133 (0.9%/year) and 70,653 (1.2%/year), respectively, without improving the Turnpike in Newington and Dover. He also noted that peak travel times between Exits 1 and 6 on the Turnpike would change in the study area over time depending on whether or not the Turnpike is widened to either 6 or 8-lanes. For example, under the No-Build condition, the existing weekday northbound PM peak hour average vehicle travel time between Exits 1 and 6 will increase from approximately 10 minutes (2005) to 20 minutes in 2025. Assuming widening of the Little Bay Bridges and Turnpike, current travel times would be reduced by approximately 3 minutes under the 6-lane build alternative, and by approximately 6 minutes under the 8-lane build alternative.

Jim concluded his discussion of indirect impacts by summarizing the key changes that would occur due to various alternatives by 2025. He stated that if no improvements are undertaken (no build alternative), population would increase by 50,000 persons within the study area, and the number of households would increase by approximately 21,000. Under the 6-lane bridge alternative, Jim explained that by 2025, a relatively small increase in the number of households and population would occur, 450 and 1,350, respectively, with employment increasing by approximately 1,330 persons above the no build condition. Assuming the 8-lane alternative, increases of approximately 600 households, 1,860 in population, and 1,900 in employment above the no-build condition, could be expected.

Regarding cumulative impacts, Jim mentioned additional development at Pease International Tradeport of approximately 1.5 million square feet and the planned Liberty Mutual expansion of an additional 2,000 employees in Dover. Jim pointed out the general trend toward retail decentralization as a result of a growing population. He also pointed out that the New Hampshire Seacoast Wastewater Management Study may recommend the expansion of public sewerage, which could also affect future growth in the study area by permitting denser development.

At this point, Jim paused for questions and comments. Tom Fargo inquired as to the REMI model inputs, specifically asking if the aging of the population was reflected in the socio-economic growth

projections. Jim confirmed that the model reflects the aging of the "baby boomers". Tom followed up with a rhetorical question, suggesting that some people may believe that if the bridges and Turnpike are not widened, there will be little to no growth in the socio-economic study area. To the contrary, Jim replied, an increase of approximately 50,000 in population is expected in the study area by 2025 under the No Build condition. Widening to 6 or 8-lanes will increase study area population above the no build condition by approximately 1,357 (2.7%) and 1,860 (3.7%) people, respectively. 2025 employment increases above the No Build condition range from approximately 1,331 (6-lane widening) to 1,900 (8-lane widening). Jim further noted that the lower cost of housing in Strafford county, in comparison to Rockingham county, is the driving force, and while the rate of growth is higher in Strafford county, the absolute numbers, *vis-à-vis* population, households, and employment are relatively low.

John Scruton, 99 Sixth Street, Dover, expressed concern about the amount of land that has been lost at Hilton Park over time. He asked how much parkland would be impacted by the project. He also asked whether a tunnel could be built to connect the two portions of Hilton Park on either side of the Turnpike. Frank O'Callaghan responded that the current alternatives being considered for the project would not result in any impacts at Hilton Park. He also pointed out that if there were impacts, NHDOT would have to mitigate for those impacts. Frank added that Hilton Park could be connected and he would discuss the connection in a few minutes within the context of describing the Dover alternatives.

Tom Withka asked about current study area travel times and delays. Frank O'Callaghan explained that currently, between Exit 1 and Exit 6, it takes approximately 9 to 10 minutes to travel that distance during weekday evening peak hours. He noted that under the 2025 No Build condition, such travel time would double. Additionally, the peak "hour" would spread to approximately 3.5 hours. Tom Fargo pointed out that these travel times relate to "non-incident" times. Frank concurred adding that with an accident or vehicle breakdown, traffic quickly backs up, increasing traffic congestion throughout the study area.

There being no further questions or comments, Frank O'Callaghan described the two proposed alternatives in Dover – Alternative 2 and Alternative 3. He referred to a conceptual plan of Alternative 2 and noted the common elements of both alternatives: a grade-separated Hilton Park connector, closure of Exit 5, reconfiguration of the Exit 6 NB off-ramp to a signalized diamond interchange, closure of the Boston Harbor Road access ramp to the SB Exit 6 on-ramp, closure of the Cote Drive Turnpike access, conversion of the Turnpike overpass to 2-way traffic flow, and construction of a new NB on-ramp at Exit 6. Frank then described the changes in traffic patterns associated with these infrastructure modifications. He stated that there has been to date a lot of discussion about the proposed signalized diamond-type NB off-ramp, in comparison to the concept of converting the existing single lane loop ramp [that currently accommodates the NB to WB traffic flow to the Scammell Bridge] to a 2-lane loop ramp as would be warranted by future 2025 travel demands. With respect to the proposed signalized diamond-type off-ramp, Frank noted that peak hour traffic operations would be satisfactory and that vehicle queuing back from the signal would be contained on the off-ramp and would not spill back onto the Turnpike. Signal operations at the off-ramp would provide gaps in the Dover Point Road/overpass traffic stream which would make it easier for traffic to exit and enter Dover Point Road located to the east of the off-ramp. In addition, WB traffic turning left from the off-ramp will not be required to stop at the traffic signal located at the US 4/SB on-ramp intersection. In contrast to the signalized diamond-type off-ramp proposal, the alternative of a 2-lane loop ramp (free flow conditions) raises safety and traffic operational concerns, would require a wider and longer structure to overpass the Turnpike thus increasing construction costs by approximately $2 M, and results in a NB on-ramp location and layout which would be blocked by vehicles queued back from the Dover toll plaza during the weekday PM peak hour. As

such, the project design team remains unconvinced of the merits of the 2-lane loop ramp concept, and recommends the signalized diamond-type NB off-ramp be retained under both Alternatives 2 and 3.

With respect to Alternative 3, Frank noted that a grade-separated connector (under the overpass) would be provided connecting Spur Road with Boston Harbor Road. This would eliminate the need for a traffic signal at the Boston Harbor Road/Spur Road intersection and would provide a local connection (separate from US 4) connecting the residential areas of Spur Road and Boston Harbor Road . (Turns would be restricted to right in/right out). He also identified the two direct impacts of the Dover alternatives (mentioned earlier by Jim Hicks) as K-9 Kaos and Adaptations, both located on Dover Point Road.

A resident asked why the access ramp from Boston Harbor Road to the SB on-ramp is being closed. Frank responded that ramp geometry limits entering traffic from Boston Harbor Road to low speeds. With the 2025 SB on-ramp traffic volume increasing by approximately 60 percent in the weekday AM peak hour, the merging of the low volume, and low speed traffic from Boston Harbor Road with the heavier volume of relatively high speed traffic from US 4 will result in poor traffic operations and a potentially dangerous merge condition. A safer alternative (with minimum inconvenience) is the rerouting of the Dover Point Road and Boston Harbor Road traffic to turn right at the Boston Harbor Road/US 4 intersection and then to turn right again to enter the SB on-ramp.

Frank then reviewed the profile of the Turnpike noting the proposed Hilton Park connector (under the Turnpike) located approximately 1,200' north of the channel. He noted that an alternative location abutting the channel had been considered, but was deemed infeasible due to floodplain and parkland impacts; such an alternative would also result in additional construction costs of approximately $5.5 M (to extend the Little Bay and General Sullivan Bridges by one span). He also reviewed preliminary engineering studies of elevating the Hilton Park connector over the Turnpike at the proposed connector location (approximately 1,200' north of the channel). Such an alternative would allow the profile of the Turnpike to remain at its existing elevation. He noted that maximizing the grades on the connector road (but no steeper than 8 percent) and providing the minimum vertical clearance (16'-6") required over the Turnpike could not avoid causing additional property impacts along Dover Point Road to meet grade on Dover Point Road. As such, the concept of elevating the connector road was dropped from further consideration.

With respect to the alternative of providing the connector road adjacent to the channel, Bruce Woodruff asked if the analysis considered the option of removing the General Sullivan Bridge (GSB). Such an option might reduce or eliminate potential impacts to the park. Frank responded that removal of the GSB was not reflected in the analyses to date. Bruce added that, based on the discussion of alternatives and review of traffic patterns, he had a better understanding of the future traffic operations of Exit 6.

Jack Newick concurred with the safety concerns associated with recommending the closure of the Boston Harbor Road ramp connection to the Exit 6 SB on-ramp noting that elderly drivers comprise a part of this ramp-to-ramp traffic. He also noted that the proposed connector roadway must accommodate trucks. Bruce Woodruff added that hauling of boats with masts must also be accommodated. Sandy Hislop stated that 14' mast height would be necessary; masts higher than 14' could be lowered or broken down for clearance. As such, the proposed 14'-6" clearance for the connector, as proposed traversing under the Turnpike, will be adequate.

Rick Sirois from Dover Point Road inquired whether all the traffic from Hilton Park would be rerouted to Dover Point Road. He asked if this issue has been studied and wanted to know if noise and dust in the neighborhood would increase during construction. He asked whether a berm could be built to mitigate these concerns. Frank O'Callaghan responded that the rerouting of traffic has been reflected in the analysis of future conditions. Chris Waszczuk stated that noise impacts were being assessed and that conceptual noise mitigation will be addressed at the next ATF meeting and upcoming Public Information Meetings.

Rick Hebert introduced himself as a user of the roads which are going to be improved by the project. He pointed out several examples of other roads in the region where double turning lanes are operational. Rick emphasized that he was opposed to traffic lights. He challenged the design team to develop an alternative that eliminates traffic signals. Frank O'Callaghan responded that he agrees that there are numerous examples of dual turning lanes, but these left turning lanes are controlled by traffic signals. Frank pointed out the NB exiting vehicles traveling west to US 4 might stop at the off-ramp signal, but would never be required to stop at the SB on-ramp signal, and under Alternative 3, would travel free flow from the NB off-ramp to the Scammell Bridge. In reality, there is only one traffic signal for the NB to WB traffic flow.

Ray Bardwell of Spur Road stated that the design team is to be commended for their fine work in designing the highway improvements considering the limited ROW and compactness of the Exit 6 area. That said, he believes that the WB loop ramp could be enhanced by adding a second lane to it. He further believes that trucks will impede the efficiency of double left turns under the proposed diamond configuration. Lastly, he stated his opposition to traffic signals and asked why the Exit 5 on-ramp from Hilton Park couldn't remain. Chris Waszczuk replied that Alternative 3 was developed in part to eliminate excess signalization as discussed above. Regarding a two-lane loop ramp, Chris reiterated NHDOT's concerns with traffic operations and safety. Regarding the closure of Exit 5, Frank O'Callaghan stated that the proximity of the Exit 5 on-ramp to the Exit 6 off-ramp, given the increase in 2025 travel demands, precludes the safe operation of traffic weaving between entering at Exit 5 and exiting at Exit 6. (Additionally, acceptable geometry at Exit 5 simply cannot be provided without substantial impacts to Hilton Park or the Wentworth Terrace neighborhood.)

Bruce Woodruff noted that the problem in the Exit 6 area is that there is not a lot of available land to work with. If the land area were available, a cloverleaf interchange could be built. The loop ramp issue was looked at in Alternative 1, and it resulted in the loss of several residential properties. This was deemed unacceptable by the City. Frank O'Callaghan confirmed that if a two-lane loop were constructed, standards would dictate that the radius of the loop be enlarged thus resulting in additional impacts to residences. He explained that the design approach retains the existing Exit 6 configuration to the extent possible, while improving the roadway capacity and safety and minimizing environmental and property impacts.

Ray Bardwell asked if it were possible to construct an off-ramp to Spur Road in the vicinity of where it used to be located (i.e. immediately west of the Dover Point Road bridge over the Turnpike). Frank O'Callaghan pointed out that this was not possible due to the grade differences, limited space available, and potential impacts. Tom Fargo added that there would be potential impacts to wetlands and public conservation lands north of this location.

Rick Hebert questioned the need for the proposed Exit 6 NB on-ramp. Chris Waszczuk replied that the off-ramp is relatively inexpensive and allows more people to access the highway directly, which would reduce circuitous and unnecessary traffic volumes on the Turnpike and local roadways.

Tom Fargo reiterated his preference for locating the Dover Point connector road in proximity to the channel, if possible. He questioned whether or not the potential impact to parkland could be avoided if the GSB were either removed or rehabilitated for pedestrian/bicycle use only and the approach to the bridge narrowed. The project team will re-examine connector options at the channel both with and without the GSB.

Chris Cross asked if there were any additional questions. As there were none, the floor was turned over to Pete Walker to provide a summary of the potential wetland impacts and details on preliminary wetland mitigation. He explained that because the project will impact wetlands, NHDOT has to assess the wetlands in the project area and describe the impacts. He stated that from a permitting standpoint, wetlands can be one of the more significant issues in a project of this magnitude. Pete then spoke about the potential project impacts and said that because preliminary impacts have been estimated, they would be updated as designs undergo further refinement.

Pete summarized the impacts to Dover wetlands that would result from Alternative 3 and the Westerly Bridge Rehabilitation. Impacts include both palustrine (fresh water) and estuarine (tidal influenced) wetlands. He stated that in Dover the impacts to wetlands would be between 4 and 5 acres, and in Newington, impacts are about 2.5 times greater or between 11 and 12 acres.

Pete then explained the regulatory framework governing wetland protection. In New Hampshire, NHDES oversees wetlands and requires mitigation for certain wetland impacts. NHDES favors mitigation within the same watershed where possible, has established ratios for specific types of mitigation [e.g. 10 Ac of preservation per 1 Ac of wetland impact] and favors wetlands preservation. At the Federal level, the Army Corps of Engineers (ACOE) has jurisdiction by way of the Clean Water Act Section 404, and that ACOE cooperatively reviews projects with EPA, USFWS, and NMFS. As a matter of practice, the ACOE does not require specific mitigation ratios, although they have required specific compensation amounts for certain projects. The ACOE typically prefers restoration, then preservation, and allows creation in some cases.

Pete described recent examples and types of wetland mitigation – creation (Brentwood), restoration (Rye Harbor) and preservation (Tilton) – projects in New Hampshire. He also described the methodology and process to identify suitable mitigation parcels. The first step is to assemble GIS layers that show existing conserved lands and wetlands. Next, numerous existing publications and reports were reviewed and consultations were made with respective Conservation Commissions, the Nature Conservancy and Regulatory Agencies. Finally, parcels identified to have mitigation potential were field reviewed by biologists skilled in performing these types of assessments. He then described the possible mitigation sites in Dover.

Referring to a map that was distributed to attendees, Pete described the Blackwater Brook site (DR-8) located along the Rochester municipal boundary. He explained that this site was the preferred site for mitigation in Dover, as it would provide a preservation opportunity that Dover and the Nature Conservancy both favor. The site is undeveloped with a variety of upland and wetland habitat that is connected to existing conservation land. Blackwater Brook flows through the site from the east and drains to the Bellamy River. If selected for mitigation, NHDOT would conserve 40 to 50 acres of property, or approximately 10 times the 4-5 Ac project wetland impact in Dover.

Pete then described the remaining parcels, which include the Bellamy River (DR-4) site, Johnson Creek (DR-11) and Varney Brook sites. He stated that the Bellamy River site is less desirable as it is comprised mostly of wetlands and has encroaching development around it. Because it is mostly wet, the property is essentially "protected" from development. The Johnson Creek (DR-11) site is limited by the residential development that surrounds it. Use of the Varney Brook site for mitigation would involve upgrading culverts and removing invasive species. Pete indicated that such efforts might be more complicated than the ecological benefit and cost; as such, this site was not being recommended.

In Newington, Pete explained that restoration was being considered as the primary form of mitigation. In total, 18 sites have been reviewed, with 10 sites appropriate for restoration, and eight suitable for preservation and limited creation opportunities. With regard to restoration, the highest priority site includes the Flagstone Brook/Railway Brook/Pickering Brook stream system (NN-4/NN-8) and the adjacent former Drive-in Theatre site. Pete described the stream system as consisting largely of a straightened channel with heavy sediment loading. Although the stream is quite degraded, it is located within a land area that is considered high value for wildlife. Regarding the former Drive-in property, Pete explained that NHDOT might use the parcel during construction for staging, and that when complete, could potentially restore and preserve a portion of, or all of, this property in association with stream restoration. As for the Coastal Ponds that border the Piscataqua River, initial evaluation suggests that restoration of the ponds would involve dredging the ponds. After a field review, it was determined that the lower pond is actually in good health as it receives regular tidal flushing. The upper pond has now reverted largely to marsh as it has become laden with sediments. As such, it is now providing important water quality functions for Pickering Brook, which flows through it.

Pete then summarized the attributes and limitations of the remainder of the potential sites in Newington. He explained that some of these sites are less desirable or not recommended for further consideration for a number of reasons. With respect to preservation opportunities, the Knight Brook site (NN-3) and the Watson properties located near Fox Point and Tricky's Cove, respectively, were identified during earlier study efforts as opportunities to expand on existing conservation land located nearby. The Knight Brook property was field reviewed and consists of a variety of habitat including forest, wetland, and agricultural fields. The Watson properties have not yet been field reviewed.

The following sites were mentioned by Pete as being initially considered, but upon further assessment, are not likely to be pursued further. Paul Brook was thought to represent an opportunity for stream restoration, but upon field inspection, was determined to have limited opportunities, as the stream is in relatively good condition, considering its landscape amidst commercial and industrial development. Pete mentioned that it might be possible to restore the so-called "unnamed stream", but because of its location amidst extensive commercial development (i.e. pavement and buildings), restoration opportunities might be limited to improving storm water BMPs in upgradient areas that drain to the stream. With regard to Hodgson Brook, this stream is the focus of a current stream corridor study, so any opportunity for restoration will be identified (and undertaken separately from this project) when the study is complete. He also indicated that the circumneutral swamp site (NN-6), located in the northwest quadrant of the Exit 1 (Gosling Road) interchange, consists mostly of wetland, with very limited additional property available for preservation. As such, it was likely that no further action would be taken with this site.

Pete concluded his presentation of specific sites in Newington by describing the remaining locations, which include McIntyre Brook (NN-1, NN-2), Stubbs Pond, Thomas Family Tracts, and the Fabyan Point site. McIntyre Brook includes restoration opportunities similar to

Flagstone/Railway/Pickering Brook, while the latter two sites might be opportunities for preservation. (The Thomas Family Tracts and Fabyan Point sites have not yet been field reviewed.) Stubbs Pond is currently the focus of an environmental restoration project (by others), so no further action will be pursued at this time.

Pete closed by suggesting that, assuming Resource Agency concurrence, the appropriate mitigation package may generally emphasize wetland preservation in Dover, and wetland restoration in Newington. He then reviewed the next steps in the process for assembling an appropriate mitigation package. These include: a field walk with Resource Agencies scheduled for September 13, 2005; follow-up with communities; the development of a formal proposal in the Draft EIS; preparation and filing of an ACOE Individual Permit; and preparation of the Final Environmental Impact Statement.

Following Pete's presentation, Tom Fargo, speaking as Chairman of the Strafford Regional Planning Commission Executive Committee and Dover Conservation Commission, stated that he strongly supports the recommendation to protect and preserve the Blackwater Brook site (DR-8). He noted that Dover is currently securing easements in the vicinity of a water supply well located to the east of the Turnpike, and also to the south of Blackwater Brook. Tom also stated that the City is working with landowners of the parcels that comprise the Bellamy Brook site (DR-4). He stated that, if possible, Dover would like to partner with NHDOT in preserving this site.

John Scruton asked whether anyone has considered the possibility of not building the bridge, but focusing instead on advancing outreach efforts and incentives to encourage ride sharing, carpooling, etc. Also, Mr. Scruton inquired why information on the Newington portion of the project is being presented in Dover. Frank O'Callaghan responded that employer-based TDM programs are in fact being considered as part of this on-going study. Expanded transit and ride-sharing programs will be part of the total improvement program and will have a positive effect on air quality in the highway corridor; however, such programs would not, in and of themselves, preclude the need to widen the Little Bay Bridges and Turnpike. With regard to presenting Newington information at this evening's meeting hosted in Dover, Chris Cross explained that it is appropriate information for the entire project at every ATF meeting, regardless of location, since the project affects portions of each community. Chris added that the ATF represents local and regional stakeholders, including representatives from Dover and Newington, and acts as a liaison between the project proponents and the public at large. Meetings are scheduled alternately in Dover and Newington for the convenience of residents, not to limit or focus discussion on a single community.

Chris Cross thanked all for attending the meeting. He noted that Phase 3 of the study is scheduled to be completed by the end of the year (2005). The goal is to have a preferred alternative, endorsed by the ATF, to present at Public Information Meetings later this fall. (Public Informational meetings are presently scheduled for November 7th in Dover and November 9th in Newington). The next ATF meeting has been re-scheduled for October 26th, 2005 at Newington Town Hall.

The meeting adjourned at 9:05 pm.

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE (ATF) MEETING
DOVER CITY HALL
AUGUST 24, 2005

Name Tom Withka
Affiliation Resident
Address 14 Footbridge Lane
Dover, NH 03820

Phone /Email 740-1411 / tpw8791@comcast.net

Name Leon Kenison
Affiliation PDA
Address 360 Corporate Dr
Portsmouth

Phone /Email 766-9292 /

Name Roy Bisbee
Affiliation Citizen
Address 199 Spur Rd.
Dover, NH

Phone /Email SpurRoad@aol.com /

Name Michael Dugas
Affiliation NHDOT
Address

Phone /Email /

Name Marc Laurino
Affiliation NHDOT
Address

Phone /Email /

Name Pete Walker
Affiliation VHB
Address

Phone /Email /

Name Jake Tenney
Affiliation VHB
Address

Phone /Email /

Name Tim Roaches
Affiliation SRPC
Address TRoaches@strafford.org

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE (ATF) MEETING
DOVER CITY HALL
AUGUST 24, 2005

Name Jim Hicks
Affiliation RKG Associates
Address 277 Main Rd
Durham, NH 03824

Phone /Email 868-5513 / jchicks1.com

Name
Affiliation
Address

Phone /Email /

Name JOHN SCRUTON
Affiliation PEDESTRAIN
Address 99 SIXTH ST
DOVER NH 03820

Phone /Email 603-742-2312

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE (ATF) MEETING
DOVER CITY HALL
AUGUST 24, 2005

Name Tim Lyons
Affiliation Senator Judd Gregg
Address 16 Praise Blvd
Portsmouth, NH 03801
Phone /Email 431-2171 /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Cross, ATF Chair, RPC
Steve Parkinson, Portsmouth
Tom Fargo, SRPC
Marlon Frink, Newington
Jack Newick, Dover
Maria Stowell, PDA
Cynthia Copeland, SRPC
Bruce Woodruff, Dover
Mel Jenkins, SRPC
Cheryl Phoenix, Seacoast Commuter Options
Bill O'Donnell, FHWA
Joe Moyer, FHWA
Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Tom Wholley, VHB
Pete Walker, VHB
Frank O'Callaghan, VHB

Date/Time: October 26, 2005

Project No.: 51425.00

Place: Newington Town Hall

Re: Newington-Dover 11238
ATF Meeting #15

Notes taken by: Frank O'Callaghan

Chris Cross called the meeting to order at 6:40 PM. He welcomed all to the 15th ATF meeting; he noted that the purpose of the Advisory Task Force (ATF) is to provide input to the design team in developing improvement recommendations for the critical Spaulding Turnpike corridor. Chris stated that the project team was approaching the completion of Phase 3 of a 5 phase process and was looking for public input on the recommendations developed to date. He reiterated that the role of the ATF is to function as a liaison to the project team, funneling public input to the team, and disseminating project related information back to their respective constituencies.

Chris Cross then requested the ATF members to introduce themselves; following the self introductions, Chris explained that meeting minutes for each ATF meeting are posted on the project website (www.newington-dover.com). The website also contains project related plans and documents which reflect a wealth of data and issues relating to the environment and land use. He noted that this evening provided an opportunity to comment on the preferred alternative recommended by the project team. Their recommendation reflects engineering and environmental studies, public input and community support. Following review of the meeting agenda, Chris noted that Public Informational Meetings have been scheduled for November 7, 2005 in Dover and for November 9th in Newington. He next referred to the draft August 25, 2005 ATF meeting minutes and

asked the ATF members for any comments or notations. There being no comments, the draft meeting minutes were unanimously adopted as final.

Chris Waszczuk spoke next and stated that the project team would present the NHDOT's suggested preferred alternative. He noted that development of the suggested preferred alternative reflected a comprehensive public outreach process to date, which involved 5 public informational meetings, 14 ATF meetings, numerous meetings with federal and state Resource Agencies, and meetings with Town and City officials. The suggested preferred alternative is multi-modal in approach and reflects the consideration and assessment of such issues as system and local access, configuration of the interchanges, Turnpike profile, disposition of the General Sullivan Bridge (GSB), six versus eight lanes, environmental resource protection and property impacts. Chris concluded by introducing Frank O'Callaghan who would present a summary of the suggested preferred alternative; he stated that, upon review of the recommendations, he hoped attendees would agree that the project team was moving in the right direction and we were adequately balancing issues and impacts.

Frank O'Callaghan then initiated his presentation of the suggested preferred alternative. He began by focusing on the Little Bay Bridges (LBB), which are recommended to be rehabilitated and widened to four lanes in each direction. Frank stated that three general purpose lanes and one traffic management lane would be required between Exits 3 and 6 and would provide satisfactory level-of-service (LOS D) beyond the 2025 design year. He noted that three lanes in each direction, even if combined with the most aggressive combinations of travel demand management (TDM), would not provide a safe and adequate level of traffic service and would not meet the project purpose and need. The rehabilitation and widening of the LBB would maintain the existing 60 mph design speed profile and the existing vertical clearance over the channel. The bridge piers would be seismically retrofitted, and construction would be undertaken in two phases so that two lanes of travel in each direction would be maintained at all times. Bridge widening would be to the west to avoid impacting Hilton Park and to minimize impacts to the bay. Frank noted that four lanes in each direction between Exits 3 and 6 would provide future flexibility for lane management beyond 2025. Preliminary cost estimates are approximately $55.5 million, which is approximately $38 million less than a new bridge would cost.

With respect to the GSB, the project team recommended rehabilitation to six-ton loading, which would support maintenance and emergency vehicles, and use by pedestrians and bicyclists and for other recreation. Frank noted that the GSB is the second highest rated historic bridge in New Hampshire and is eligible for the National Register of Historic Places. It is a 4(f) resource and afforded protection under federal regulations; it provides an important pedestrian and bicycle system connection and is utilized for recreational activities. He stated that these uses would be more pleasurable on the GSB in comparison to the multi-use path alternative attached to the LBB. The GSB would also provide future flexibility and redundancy with respect to incident management and transit use. The approximate cost of the GSB rehabilitation is $23 million, approximately $10 million more than its removal and replacement with a multi-use path would cost, not including the additional cost of mitigation likely to be required should the GSB be removed. Frank stated that the FHWA, NHDHR, SRPC and City of Dover support bridge rehabilitation, suggesting that it would be difficult, from a 4(f) perspective, not to justify the expenditure of funds given the feasibility of reuse and net cost difference ($10 million) relative to total project cost (approximately $174 million).

Frank next described Alternative 3 in Dover, which provides a full service interchange at Exit 6, improving both system and local connectivity. He noted major characteristics including the closure of Exit 5 and the Cote Drive on-ramp, the diamond-type configuration for northbound travel, two-way traffic flow on the overpass, the grade-separated connector between Spur Road and Boston Harbor Road that eliminates the need for a traffic signal at the Spur Road/Boston Harbor Road

intersection, a short on-ramp from the connector road to the southbound on-ramp which has the effect of maintaining the existing Boston Harbor Road ramp, and the local connector adjacent to the channel linking both sides of Dover Point and Hilton Park. Frank paused and compared existing traffic patterns with changes resulting from Alternative 3. With respect to the local connector abutting the channel, he noted that the roadway would be designed for 20 mph, two-way traffic, and that 14'-6" vertical clearance would be provided for trucks and boats. The existing pedestrian and bicycle connection between both sides of Hilton Park would also be maintained. He also pointed out that limiting the GSB to pedestrian and bicycle use allowed reconstructing the GSB approach for the local roadway connector and avoided impacting Hilton Park. An ADA-compliant ramp would be constructed for bicycle and pedestrian access to the GSB. By locating the local roadway connector adjacent to the channel, the Turnpike profile could be lowered which would reduce noise and visual impacts. Frank noted that two Dover Point Road businesses, K-9 Kaos and Adaptations, would be impacted, retaining walls on both sides of the Turnpike would be utilized to minimize impacts, and that the construction cost of Alternative 3 was approximately $44 million, including the LBB approach.

Frank then proceeded to describe Alternative 13, which reconfigures Exit 3 as a full service interchange with both off and on-ramps in both northbound and southbound directions. A roadway connection to the Tradeport is provided at Exit 3, and the off and on-ramps to Nimble Hill Road (southbound) and Shattuck Way (northbound) are maintained, as well as the two-way Shattuck Way extension to Nimble Hill Road which is currently under construction as part of the Interim Safety Improvement project. Northbound Exit 2 would be closed with traffic re-routed through Exit 3. Alternative 13 allows for a future rail project to reconnect the Pease Spur and the Newington Branch Line by traversing above the Turnpike along the existing rail corridor. As part of the Newington-Dover project, it is recommended that the necessary right-of-way and easements be secured, a portion of the viaduct's pier foundation (located in the Turnpike's median) be constructed, and a memorandum of agreement between the NHDOT and PDA on future construction cost-sharing be secured. By carrying the rail connection over the Turnpike, the Turnpike's profile can be maintained at its existing elevation, thus reducing noise and visual impacts. The existing ExxonMobil facility would continue to operate at its current location via access from a local connector road extending from Nimble Hill Road as the fourth leg of the Shattuck Way intersection. The facility's existing driveway on Nimble Hill Road is proposed to be discontinued. Overall, local connections and Turnpike access are improved, and the service life of Exit 1 (Pease Boulevard/Gosling Road) would be extended due to the additional access to the Tradeport provided at Exit 3. Frank noted that the Woodbury Avenue cross-section had been reduced to avoid impacting the Isaac Dow House and Beane Farm structures. Alternative 13 is estimated to cost approximately $47.3 million and impact approximately 25 acres of Tradeport property.

Frank then addressed Transportation Systems Management (TSM) recommendations that are generally low cost, short-term actions to improve existing safety and traffic operational conditions. He noted that improved directional signage at Exit 6, increased signage on the LBB approaches to remind drivers not to change lanes, and striping of the shoulder area to increase the northbound Exit 6 deceleration lane to exit westbound had already been implemented. The Interim Safety Improvement Project at Exit 4 in Newington is under construction and will be completed in 2006. This project eliminates deficient traffic weaving conditions between Exits 4 and 4N, improves local traffic connections between Nimble Hill Road and Shattuck Way/Woodbury Avenue, and improves the northbound merge condition at Exit 3 for Woodbury Avenue traffic. The restriping of the Exit 6 southbound on-ramp to reduce the merge of traffic from two lanes to one is also recommended to improve traffic flow in the short term.

Frank next described the recommended Travel Demand Management (TDM) program of alternatives to reduce the level of peak period traffic within the study area, and to give seacoast area commuters

more options as to how and when they travel. He noted that the TDM program encompassed new park-and-ride facilities, expanded bus service and rail service, and employer-based measures. With respect to park-and-ride, a new 416-space facility is currently under design at Exit 9 in Dover, and will be constructed in 2006 as a separate CMAQ-funded project. The facility will be serviced by the planned COAST express bus service (Rochester-Portsmouth), Dover's downtown transit loop service, and expanded commuter bus service proposed by C&J Trailways. A 200-space facility is recommended for the Exit 13 area in Rochester, and would likely be implemented under a separate CMAQ-funded project, and be coordinated with the Turnpike improvements currently being planned and designed for the Exit 13 area. A 50-space facility is also recommended for the US 4 corridor to be located in Lee in the vicinity of the US 4/NH 125 intersection and also funded under the CMAQ program as a future CMAQ project.

With respect to expanding bus service, Frank described three alternatives. Alternative 1 expands intercity service between Rochester, Portsmouth and Boston. C&J has filed a CMAQ application to extend service north to the proposed Exit 9 park-and-ride facility in Dover by providing 16 daily round trips from Portsmouth. This service would then be extended to Rochester by either C&J or another provider as soon as the Exit 13 park-and-ride facility is completed. The capital cost of extending the service to Rochester would range between $2 and $4 million, depending on the level of service and provider. Bus Alternative 2 involves adding a bus to the proposed COAST express bus service between Rochester and Portsmouth to reduce peak period headways. This service is programmed for 2006 and could be expanded as proposed for a capital cost of approximately $400 thousand, and funded via a CMAQ grant or through project funding. Bus Alternative 3 involves expanding local service on COAST Route 2 (Rochester-Portsmouth), Wildcat Transit Route 4 (Durham-Portsmouth) and the COAST Pease Trolley by reducing headways during peak periods. In addition to adding additional buses, an improved transfer point for these three routes would be developed in the vicinity of Exit 1 and the malls. The capital equipment and construction cost of Bus Alternative 3 is approximately $3.9 million.

From a rail perspective, Frank stated that NHDOT was supporting a joint MaineDOT/ NHDOT/NNEPRA CMAQ proposal to expand *Downeaster* service between Portland and Boston. Expanded service would add a fifth daily round trip between Portland and Boston, and improve the peak hour schedule of commuter service through New Hampshire by constructing sidings in Dover and Newfields and replacing approximately three miles of track in New Hampshire. The total cost of this proposal is approximately $6 million with the NHDOT CMAQ share approximately $1.2 million.

The final element of the recommended TDM program would be extending the funding of Seacoast Commuter Options, the greater Portsmouth and seacoast regional transportation management association (TMA), that promotes employer-based options to commuting alone such as ridesharing and transit. Frank closed his presentation by stating that the overall total cost of the suggested preferred alternative is approximately $174 million.

Tom Fargo stated that following the recent (October 5, 2005) Dover City Council workshop, the City Council tabled a motion to endorse Alternative 3 and maintain the GSB, pending further discussion of potential changes to traffic patterns and volumes along Boston Harbor Road and Dover Point Road. Chris Waszczuk responded that the relocated Boston Harbor Road ramp to the southbound Exit 6 on-ramp, as proposed, might address the Council's concern. Bruce Woodruff asked if VHB could provide a traffic volume comparison of the existing and future conditions on Boston Harbor Road and Dover Point Road. Frank O'Callaghan responded in the affirmative.

Chris Cross asked if the ATF could endorse or reach consensus on the preferred alternative as suggested, or possibly modified. In his view, the ATF and public have reached consensus on the need for eight lanes, rehabilitating both bridges and widening the LBB to the west. Bruce Woodruff offered that a new replacement bridge was too expensive, and that the recommended proposal was the best alternative for the available funding. Ray Bardwell asked if the piers of the LBB and GSB might be connected to reduce the existing turbulence in the channel. Chris Waszczuk replied in the affirmative, stating that the turbulence of the current could possibly worsen if the space between the piers were reduced, leaving a much smaller gap than presently exists, but not connecting the piers. Jack Newick concurred, stating that connecting the bridge piers eliminates the potential for boats getting trapped between the piers. Chris Waszczuk noted that UNH is conducting hydrodynamic modeling of the channel currents and conditions.

Chris Cross asked about the relocation of the local Dover Point connector abutting the channel. Tom Fargo responded that Bruce Woodruff and he had suggested the relocation, and that the City Council supports the location adjacent to the channel. Ray Bardwell asked if Exit 5 could be maintained. Chris Waszczuk responded that Exit 5 could not be maintained. In general, there is too much traffic entering and exiting the Turnpike within a very compact area between Exits 3 and 6. To provide a proper deceleration lane and entrance geometry at Exit 5 would severely impact Hilton Park; and the distance between an Exit 5 on-ramp and the off-ramp to Exit 6 is inadequate to provide safe and efficient traffic operations such as weaving and changing lanes. Tom Fargo asked if local traffic networks (Boston Harbor Road and Dover Point Road) could be provided to City officials. Frank O'Callaghan confirmed that the networks would be provided.

Chris Cross asked if there were any comments relative to Alternative 13 in Newington. Marlon Frink stated that the Board of Selectmen, Planning Board and Conservation Commission have endorsed Alternative 13 citing their concerns with the higher Turnpike profiles of the other alternatives. Maria Stowell stated that the PDA also endorses Alternative 13, subject to the drafting and approval of a memorandum of understanding among the NHDOT, FHWA and PDA regarding the future extension of the Pease Spur over the Turnpike. Chris Cross noted that Alternative 13 recognizes the future benefit of potential rail service.

Angela Carter, representing the Dover Point Road neighborhood, requested a brief review of the Turnpike profile so that she clearly understood the related issues. Frank noted that retaining walls are proposed in Alternative 3 adjacent to the Exit 6 northbound off-ramp to minimize impacts to the Dover Point Road property owners. Ray Bardwell stated that the geometry of the US 4/Spur Road intersection needs to accommodate westbound right turns of trucks. He suggested adequate acceleration and deceleration lanes be provided. Chris Cross concluded the discussion of Alternative 13 by noting the ATF's endorsement subject to the aforementioned comments.

Chris Cross requested comments on the recommended TSM alternatives, specifically the Exit 6 southbound on-ramp proposal. Bruce Woodruff inquired as to schedule. Chris Waszczuk replied that implementation could happen as soon as 2006. Bruce stated that, in his view, implementation of this action (Dover TSM 2) is needed immediately. Gail Pare asked the schedule for discontinuing the median turnaround at Exit 4N. Chris Waszczuk replied that he expected related work to be completed in the fall of 2005, which would coincide with the discontinuance of the turnaround. Bruce Woodruff expressed support for the *Downeaster* service expansion and suggested that the ATF express its support of the recommendation to the GACIT (Governor's Advisory Commission on Intermodal Transportation). Chris Waszczuk replied that approval of the CMAQ application is in progress, and that Commissioner Murray has endorsed the recommendation. Chris Cross inquired as to the potential of double tracking the Main Line West (which carries the *Downeaster*), which would potentially allow future expansion in service. Chris Waszczuk noted that such work would cost in

excess of $100 million and was more regional in nature and beyond the scope of the Newington-Dover project. The recommended service expansion, as proposed, can be accomplished on the existing single track in New Hampshire with relatively minor improvements to the passing sidings in Newfields and Dover. At this point, Maria Stowell recognized Cheryl Phoenix, Executive Director of Seacoast Commuter Options. There being no further comments, the ATF endorsed the recommended TSM and TDM proposals.

Frank O'Callaghan next asked Tom Wholley to summarize the noise impact analysis and recommended mitigation. Tom reviewed the procedures, guidelines and criteria for conducting the analyses. He noted that existing noise levels were measured during the noisiest hours of the day to determine existing noise levels and to calibrate the FHWA Traffic Noise Model. Calibration reflects topography, traffic volumes and roadway features and allows the model to be used to compare the existing noise condition with future 2025 scenarios, which reflect the various alternatives. Tom noted that noise level criteria for potential mitigation include 66 dB for residential land use, or an increase of 15 dB between existing and future conditions. He stated that the project team did not expect nor did they find any significant differences in comparing existing and future conditions. Such differences ranged between 1 and 4 dB. However, some areas exceed 66 dB under future conditions, which coincidentally, are the same locations where noise levels presently exceed 66 dB. As such, the project will enable the mitigation of some existing study area noise conditions that, but for the project, would not be addressed.

Tom reviewed the criteria for noise barrier feasibility, such as constructibility without gaps and proper height that will achieve a 7-10 dB reduction or approximately a 50 percent reduction in noise. There is also a cost criterion that the cost of the mitigation not exceed approximately $20,000 per protected residence (and still provide at least 5 dB of noise reduction). Tom then referred to the plan of Alternative 3, noting that approximately 4,100 feet of noise barrier (14' in height) is recommended on the west side of the Turnpike (Noise Barrier #1) and approximately 4,200 feet (14' in height) of noise barrier is recommended for the east side of the Turnpike (Noise Barrier #2). Tom next referred to another plan stating that noise barriers were being recommended for approximately 3,700 feet north of Exit 6, on both sides of the Turnpike. These barriers would range in height between 12 feet on the west side and 14 feet on the east side and extend beyond the Dover Toll plaza. He noted that the front row or those residences closest to the barrier receive more protection, but those residences located further away would still benefit. Tom concluded his presentation noting that no area in Newington met the noise mitigation criteria and that the lower Turnpike profile reflected in Alternative 13 would minimize noise. He also mentioned that NHDOT was researching the cost-effectiveness of "quiet pavement" design. General comments and questions followed.

Angela Carter was reassured that the east side barrier extended continuously from Wentworth Terrace to the intersection of Dover Point Road located to the east of the Exit 6 northbound exit ramp. Angela also asked if tree plantings adjacent to the barrier would be considered. Chris Waszczuk replied that tree plantings would be considered in the final design of the barriers, and that NHDOT would be sensitive to the appearance of both the front and rear of the barriers. Gail Pare echoed Chris' comments vis-à-vis aesthetics, noting the roadside color of the foliage surrounding the Exit 6 area. She stressed the need to provide landscaping as a means to avoid a stark non-descript corridor. Tom Wholley offered that the traditional concrete post and timber barrier look good, and there are also some good looking prefabricated materials available. Landscaping can make the barriers less conspicuous or "invisible". Stu Miller, Debra Lane, Dover, asked if there was sound barrier proposed for the Spur Road/Debra Lane area. Tom replied that no barrier was recommended since the area did not meet the criteria. Stu asked when the noise measurements were recorded. Tom replied that the noise measurements reflect the loudest hour. Chris Waszczuk added that noise levels reflect the average level of noise within the noisiest hour, recognizing that there may be instantaneous spikes of noise. Stu asked if the noise model considers changes in traffic volumes and different roadway

alternatives. Tom replied that the model considers both the 2025 traffic forecasts and the differences in infrastructure alternatives.

Ray Bardwell stated that better enforcement of existing noise regulations would reduce noise levels; he cited truck jake brakes and noisy motorcycles as two examples. Chris Waszczuk noted that those issues warrant legislative response. Ray cited toll plaza noise. Chris Cross replied that toll-related issues, and the toll plaza are beyond the scope and study area of the Newington-Dover project. Chris asked whether or not the NHDOT would mitigate noise to the north of Exit 6 as presented earlier by Tom Wholley. When Chris Waszczuk indicated that the NHDOT is recommending such mitigation as a project commitment, Chris Cross expressed his pleasure in the NHDOT's decision, and asked if the noise barrier locations would reflect a future widening of the Turnpike to the north of Exit 6 and the toll plaza. Tom Wholly responded that exact barrier location will be a final design consideration. Marlon Frink asked another design/construction related questions – where does the sound go? Is the sound retained or reflected? Tom replied that is depends on the type of material and whether the barriers are constructed parallel to each other or angled. Bruce Woodruff asked if the layout of Noise Barrier #1 would be modified to reflect the relocated Boston Harbor Road ramp to the connector road. Chris Waszczuk responded that it would be modified, extending north to the new ramp/connector road intersection.

Bruce Woodruff recommended that Noise Barrier #3 and #4, north of Exit 6 and the toll plaza, be incorporated into the total mitigation package. Chris Waszczuk stated that these barriers would be included, either as part of the project, or as a complementary project. Bill O'Donnell noted that separating a noise barrier project from the construction project might present funding problems. Chris replied that NHDOT would clearly define the limits of the noise mitigation. Tom Fargo added that there was discussion early on in the project that some issues, such as noise, may not be easily contained to a study area line drawn on a plan or map.

Chris Cross thanked Tom Wholly for his presentation and technical analysis. He noted that the ATF and public are engaged in a long process, and that noise mitigation is an important issue with many facets (e.g., construction materials, aesthetics, impact limits, etc.). Tom Fargo added that pavement surface treatment and materials could affect both noise and wetlands, vis-à-vis the porosity of the pavement and drainage runoff characteristics. Marlon Frink asked if rumble strips were planned for the edge of the median and shoulder areas. Chris Waszczuk replied that there is no FHWA requirement for such treatment and there has been no discussion to date; rumble strips will likely not be provided.

There being no further questions or comments related to noise mitigation, Pete Walker summarized the potential wetland impacts of the project and the proposed recommended mitigation program. He began by noting that there were approximately 15.5 Ac of wetlands impacted (11.2 Acres in Newington and 4.30 Acres in Dover) as a direct result of the project. However, the project would mitigate for approximately 17.90 Ac of impacts, taking into account approximately 0.64 Ac of impact in Newington related to the Exit 4 Interim Safety Improvement project, approximately 0.4 acres related to the Exit 9 park-and-ride facility, and approximately 1.30 Ac of impact in Madbury related to the NH 155 Bridge Replacement project. Pete summarized the regulatory framework, noting NHDES regulations and their preference for mitigating impacts within the same watershed, and federal ACOE regulations and their preference for wetlands restoration. He reviewed wetlands terminology such as "restoration" and "preservation". He reviewed the process of identifying potential wetlands mitigation parcels – review of published resources; development of a GIS database; consultations with local conservation commissions, the Nature Conservancy and state and federal resource agencies; and field review of potential sites. Potential sites are prioritized for preservation based on several criteria: contiguous undisturbed land at least 100 Ac in size, mix of

wetlands and uplands, proximity to conservation lands, level of disturbance or development and the upland buffer to a resource with functional value equal to or greater than the wetlands impacted by the project. The prioritization of potential mitigation sites for restoration is also based on criteria such as: suitable geomorphic setting, no conflicts with existing infrastructure/properties, preference to deal with as few property owners as possible, clear understanding of impairments of recent origin, and site relation to wetland systems impacted. Pete noted that wetland restoration is preferred to wetland creation.

Pete summarized the proposed wetlands mitigation package as follows: restoration of Railway Brook in Newington, preservation and restoration of the former Drive-In Theatre parcel in Newington, and preservation of 40 to 50 acres in the Blackwater Brook area of Dover. He noted that alternative mitigation elements have also been identified, including preservation of the Watson property in Newington, preservation of the Knight Brook area in Newington, and preservation at the Bellamy River west area in Dover.

Pete took questions and comments during his presentation. Marlon Frink asked if the value of the wetland is reflected in the impact and mitigation analyses. Pete responded in the affirmative, noting that a total of 24 potential mitigation sites (6 in Dover/18 in Newington) had been screened. Marlin asked if private property owners had been contacted. Pete responded that contact with property owners had been established by The Nature Conservancy. Marlon noted that the project was near the Piscataqua watershed in both Dover and Newington. He asked how the value of conservation easements would be determined. Pete replied that the NHDOT would conduct an assessment, and there would be a fee ownership transfer. Marlon asked how such easements are regulated. Chris Waszczuk responded that the deed would outline the conditions and rights of property owners after the easement is executed. Chris noted that there is some flexibility in imposing restrictions. Public access is also flexible, taking into account owner considerations.

Tom Fargo stated that Blackwater Brook hosts a number of rare or endangered species. The Dover Conservation Commission's goal is protection of these species. Public access is a lesser priority, because the Commission is more concerned with wildlife protection. The Blackwater Brook area also contributes to the City's water supply.

During the ensuing discussion, the following was noted: Railway Brook was formerly a branch of Flagstone Brook; the former Drive-In site abuts the Natural Resource Protection zone on the Tradeport, which would be an upland bird habitat for a restored Drive-In site; and the Knight Brook area has many property owners. Following this discussion, Pete Walker outlined the next steps in the wetlands mitigation process: meet with the resource agencies, follow-up with the local communities, develop a formal proposal in the DEIS, file an ACOE Individual Permit, and prepare the FEIS.

Chris Cross posed the question of the Preferred Wetlands Package as recommended. The ATF endorsed the proposed package noting the need to work with the PDA on Railway Brook, and assuming that the PDA supports the proposal. Gail Pare suggested supporting the restoration of Flagstone Brook as well. Chris responded that Flagstone Brook is not part of the mitigation package. Flagstone Brook is not as severely degraded as Railway Brook, and any modifications to the stream channel would be constrained by the abutting residential and industrial properties. Marlon raised the issue of oil separators and downstream property owner impacts vis-à-vis Railway Brook. Pete responded that the intent of the restoration would be to ensure there would be no additional flow beyond Nimble Hill Road.

There being no further questions or comments, Chris Cross thanked the project team for reaching out and working with the local officials. Marlon concurred stating, "good job". Chris Cross reminded all of the schedule for Public Informational Meetings – November 7, 2005, 7:00 PM in Dover City Hall and November 9, 2005, 7:00 PM in Newington Town Hall – and the next ATF meeting scheduled for January 18, 2006, 6:30 PM at Dover City Hall. Chris thanked the ATF for endorsing the suggested preferred alternative, which the ATF influenced. And Chris thanked the public for attending the meeting and being engaged in the project and in this meeting's discussion.

The meeting adjourned at 9:15 PM.

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Cross, ATF Chair, RPC
Jack Newick, Dover
Bruce Woodruff, Dover
Steve Parkinson, Portsmouth
Leon Kenison, PDA
Tom Fargo, SRPC
Tim Roache, SRPC
Cliff Sinnott, RPC
Steve Stancel, Dover
Marcia Colbath, Dover Open Lands
Cody Cartnick, 53 Boston Harbor Road
Carole Cartnick, 53 Boston Harbor Road
Bill O'Donnell, FHWA
Chris Waszczuk, NHDOT
Marc Laurin, NHDOT
Mike Dugas, NHDOT
Pete Walker, VHB
Frank O'Callaghan, VHB

Date/Time: January 18, 2006

Project No.: 51425.00

Place: Dover City Hall

Re: Newington-Dover 11238
ATF Meeting #16

Notes taken by: Frank O'Callaghan

In the absence of Chris Cross, Tom Fargo called the meeting to order at 6:45 PM. He welcomed all, noting they were attending the 16th Advisory Task Force (ATF) meeting. Following self-introductions of the ATF members, Tom noted the role of the ATF as a liaison to the project team, funneling public input to the team, and disseminating project related information back to their respective constituencies. Tom then turned to Chris Waszczuk who reviewed the meeting agenda. Following review of the agenda, Chris asked for comments or edits to the draft meeting minutes of October 26, 2005. He noted a typographical error on page 5 referring to the schedule of completion for discontinuing use of the median turnaround at Exit 4N on the Spaulding Turnpike (fall 2005). There being no further comments or edits, the draft meeting minutes of October 26, 2005 were unanimously adopted as amended. Chris then asked for any other comments or ideas. He stated that, in his view, the recommended preferred alternative addresses the project purpose and need while minimizing impacts to the environment and private properties. He also noted that while a couple of individuals continue to criticize aspects of the plan despite the project team's analysis and response to comments, overwhelming consensus has been expressed in support of the recommended preferred alternative. There being no further comments or questions, Chris turned to Frank O'Callaghan to summarize the main areas of comments received at the recent (November 7 and November 9, 2005) public informational meetings.

Frank identified three main areas of comment – noise mitigation, wetland mitigation and miscellaneous comments. With respect to noise mitigation, he noted that the proposed mitigation plan enjoys broad support and NHDOT is committed to its implementation. The visual impact of sound barriers is a concern; Frank noted that design of such barriers would need to balance appearance with effectiveness. "Quiet pavement" (which the NHDOT is researching) could complement, but would not replace the need for, the sound barriers. Sound-proofing of buildings is not a viable noise mitigation measure from an FHWA-funding perspective (sound-proofing of structures is used by the FAA as it is their only effective mitigation measure for airport and airplane noise.) Frank stated that there are no sound barriers proposed to be located on the Little Bay Bridges, and noted that the schedule for construction of the sound barriers would be contingent on the final design and right-of-way acquisition process, and the sequencing of construction.

With respect to wetlands mitigation, it is clear that Dover prefers wetlands preservation whereas Newington prefers wetlands restoration coupled with preservation. Several Newington residents raised concern over the potential involuntary purchase of development rights *vis-à-vis* potential wetlands preservation alternatives. Frank noted that Pete Walker would update the attendees later in the presentation on the most recent refinements and issues related to the proposed wetlands mitigation package.

Frank next touched on a number of miscellaneous items, which were discussed at the recent public informational meetings. He noted traffic operations, design issues and pedestrian needs in the vicinity of the Spur Road/US 4 intersection; a potential sidewalk extension along Dover Point Road (which Frank would address later in the presentation); changes in local traffic circulation, specifically Dover Point and the Nimble Hill Road/Shattuck Way Extension area; whether or not there were historic resource impacts in the vicinity of Bloody Point due to the construction of the Interim Safety Improvements (extension of Shattuck Way) in Newington (there were none); construction related issues – 5-6 year schedule with sequencing to be determined, two lanes of traffic to be maintained in each direction during construction, and staging areas to be determined during final design; and the means for the public to stay informed of the project – future ATF meetings, the Public Hearing targeted for May 2006 and the project website (www.newington-dover.com). Tom Fargo asked the status of the proposed hotel development located immediately south of the ExxonMobil station on Nimble Hill Road in the vicinity of the proposed local connector road. Chris Cross responded that the development site, due to its small size and proposed layout, did not have the flexibility to accommodate the local connector road as proposed, and that direct access to the Turnpike was infeasible from a traffic operations and safety perspective. As such, he believes that the proposal for the hotel site, as proposed, is not viable and will not be advanced. Chris Waszczuk asked if there were any further comments on the public informational meetings. There being none, Chris stated that he thought the meetings went well, and while there were ancillary comments and questions relating to various aspects of the plan, he felt that there was definite consensus on the preferred alternative as recommended by NHDOT. Tom Fargo noted that NHDOT and VHB have been very responsive to issues that have been raised during the course of the study, particularly the recent pedestrian issues along Dover Point Road. Chris Waszczuk responded that with respect to the potential for extending a sidewalk along Dover Point Road (which would be discussed later in the presentation), while the NHDOT had conducted preliminary engineering studies, the NHDOT is still considering whether the sidewalk extension should be a separate project, or incorporated into the Newington-Dover project, and whether or not the NHDOT should bear the total cost of construction.

There being no further comments, Chris Waszczuk distributed correspondence from the City of Dover and Town of Newington supporting the preferred alternative. He first referred to a Dover City Council resolution that passed by a 6-3 vote on November 9, 2005 and included support for Alternative 3 with the Dover Pont connector road located adjacent to the channel, support for rehabilitation and re-use of the General Sullivan Bridge as an alternative transportation facility, and a

request for state agency coordination, funding and implementation of improvements to boating infrastructure at Hilton Park. Chris noted that NHDOT is committed to coordination with the NH Fish and Game Department, but since the project avoids impacting Hilton Park, NHDOT cannot justify the expenditure of project funds at Hilton Park. The Council also endorsed and encouraged the proposed noise mitigation adjacent to the Turnpike both south and north of Exit 6, to which Chris remarked that NHDOT is committed to the proposed noise mitigation and that discussion on the noise barrier design will continue up to and after the Public Hearing. The City Council also endorsed and encouraged the provision of a sidewalk along Dover Point Road connecting the existing sidewalk on Boston Harbor Road with the proposed sidewalk along the Dover Point connector road adjacent to Hilton Park, and along the proposed connector road between Spur Road and Boston Harbor Road. They also encouraged the NHDOT to consider the Blackwater Brook area, as previously proposed, as a site for wetland mitigation. Chris noted that Pete Walker would touch on the Blackwater Brook area later in the presentation on updating of the wetlands mitigation package.

Chris next referred to the October 18, 2005 correspondence from the Town of Newington and signed by the respective Chairs of the Board of Selectmen, Planning Board and Conservation Commission. In this correspondence the Town endorsed Alternative 13 noting that further refinements may occur. The Town noted that the increased elevation of the Turnpike (as proposed in Alternatives 10A and 12A) is the issue of greatest concern and would have a severe impact on Town residents. Alternative 13 minimizes those impacts. The Town reiterated its previous request (July 26, 2005) that the NHDOT reject plans that call for an elevated Turnpike, and looks forward to working with the NHDOT in refinement of Alternative 13. On December 21, 2005, the Town of Newington commented further by stating that the Town has no objection to an elevated rail spur connecting to the Tradeport along the existing Pease Spur rail corridor. The Town strongly supports a re-connection of the rail spur from a traffic mitigation and economic development perspective, and reiterated its willingness to work with the NHDOT in any refinement of Alternative 13. This letter was signed by the Chairs of the Board of Selectmen and Planning Board, and the Vice Chair of the Conservation Commission. Chris Waszczuk noted that elevating a future rail connection across the Turnpike was an issue for both the Town and the PDA. He stated that NHDOT is committed to cost-sharing with the PDA, if and when the rail connection materializes in the future. Chris asked if there were any comments on the correspondence of support. Leon Kenison stated that the PDA was pleased with the December 21, 2005 letter from the Town of Newington. Chris Cross, speaking as a member of the Newington Planning Board, stated that a future rail connection, as proposed, would be a benefit to all. Chris Waszczuk asked if there were any comments on the recommended preferred alternative. Tom Fargo noted that the Dover City Council has formulated a second resolution on wetland mitigation, which strongly encourages the DOT to consider the Tuttle Farm as the highest priority for the project's mitigation.

At this point, Chris asked Frank O'Callaghan to summarize the preliminary study of extending a sidewalk along Dover Point Road. Frank referred to a plan noting that the sidewalk extension would be approximately 2,700' in length running along the west side of the street between Hilton Park and the point on Dover Point Road (opposite the Division of Motor Vehicles building) where the existing sidewalk terminates. He noted that by holding the east side edge of pavement, a 4-foot shoulder and 11-foot wide travel lane could be provided in each direction with provision of a 5-foot wide sidewalk and 2-foot wide utility strip, without apparent impacts on wetlands and private properties. The preliminary construction cost estimate ranged from approximately $315,000 (if constructed as part of the Newington-Dover project), to approximately $430,000 (if constructed as a separate project). Drainage would be an issue given the floodplain elevation and existing flat topography, and the construction cost estimates reflect a pavement overlay of the roadway. Chris Waszczuk added that the initial reaction of the Front Office of NHDOT to the proposed sidewalk extension is that the cost should be shared between the State and the City. Tom Fargo asked if the wetlands depicted on the base plan of Dover Point Road reflected the latest available data. Frank responded that the wetland

areas reflect the resource mapping developed for the project study area. Tom suggested that there might be more recent data along Dover Point Road due to some recent activities. Jack Newick expressed concern for bicyclists traveling along Dover Point Road as a result of the proposed sidewalk plan. Frank replied that bicyclists would be accommodated on the 4-foot shoulders being provided in each direction. Bruce Woodruff stated that in light of the changes in local traffic patterns, which increase the traffic volume through the Dover Point Road residential area, the proposed sidewalk extension should be part of the Newington-Dover project and funded 100 percent by the project. He added that the benefit to commuters resulting from the Turnpike improvements should be balanced by addressing the added burden to the local Dover Point neighborhood resulting from the Turnpike improvements. In addition, the incremental project cost ($315K) is very small in comparison to the total estimated project construction cost of approximately $174M. Both Bruce and Tim Roache agreed that alternative funding through the Transportation Enhancement Program is highly competitive, with no guarantee of project approval. Chris Waszczuk acknowledged that while the estimated sidewalk construction cost is relatively modest, it still constitutes an additional demand on limited project funding. He reiterated that while the NHDOT was not closing the door on possible project funding, he was relaying the Department's initial thoughts *vis-à-vis* cost-sharing. In the absence of a sidewalk, pedestrians could utilize the shoulder areas. Cody Cartnick, 53 Boston Harbor Road, stated that the volume and speed of traffic along Dover Point Road would place pedestrians who walk in the shoulders at risk. Chris Waszczuk asked if the City would plow the sidewalk in winter, noting that a maintenance agreement with the City will be required assuming expenditures of federal funds on the local roadway. Bruce responded that the City would not plow the sidewalk under the current City policy.

Chris Cross asked if local funds could supplement the project's state/federal funds in the refinement of Alternative 13; more specifically, the Town of Newington may be interested in extending sidewalk along Woodbury Avenue, as shown on the Town's master plan. Chris noted that impact fees collected over time from local industries within the Woodbury Avenue corridor would be the source of the local funds. He asked if local Dover businesses could, in similar fashion, be the source of the City's local funding for extending the sidewalk along Dover Point Road. Steve Stancel replied that, unlike Woodbury Avenue, Dover Point Road is primarily residential which precludes the opportunity to cost-share with local businesses. Chris Waszczuk asked if the sidewalk extension was constructed as part of the Newington-Dover project, could the City provide the 20% ($63K) match of state/federal funding. Bruce Woodruff responded that the City would need to take that question under advisement. Chris Waszczuk concluded the discussion on the potential sidewalk extension by stating that NHDOT would keep an open mind and work with the City to resolve the issue.

Pete Walker then referred to a table and briefly summarized some of the major impacts associated with the recommended preferred alternative. He noted that refinement of the impact assessment is an on-going process and reflects the continuing refinement of preliminary engineering plans. For example, he noted that there were no impacts to threatened and endangered species, and while there were no impacts to Hilton Park, there was a slight impact to Bayview Park in Dover. While there are no impacts to petroleum and hazardous waste sites in Dover, there are five such sites in Newington. Wildlife impacts are relatively small. Pete noted that noise impacts and proposed mitigation in Dover have been discussed at length; he added that wetland impacts in Dover had increased slightly due to the incorporation of and modifications to the layout of the southbound on-ramp from the connector road (Spur Road – Boston Harbor Road) to the southbound Exit 6 on-ramp as part of Alternative 3.

Pete then presented an update of the proposed wetlands mitigation package. He noted that preservation of the Tuttle Farm in Dover as part of a public/private partnership (State, City, Strafford Rivers Conservancy) was being contemplated as a substitute for preservation of 40 to 50 acres at Blackwater Brook, and that preservation at Blackwater Brook would be an alternate element. Pete explained that the Tuttle Farm was both an agricultural and wetland resource. While the wetland

value (Varney Brook) is not as rich and extensive as the Blackwater Brook area, the City of Dover and Strafford Rivers Conservancy (SRC) are currently negotiating with the owners of the farm for the sale of development rights, and the opportunity is at hand to bundle some of the project's mitigation funds with City and SRC resources to maximize the conservation of land at the farm site. Marcia Colbath stated that City of Dover resources ($1.5M bond) would conserve approximately 60 Ac of the 125 Ac site. Chris Cross observed that substituting the Tuttle Farm for the Blackwater Brook site as the recommended mitigation required one to weigh farmland preservation versus wetlands preservation. Pete stated that the fact that agricultural lands had been lost to past transportation projects supports the value of this proposed agricultural preservation; however, he noted that Blackwater Brook is a more valuable wetlands system (than Varney Brook which borders the Tuttle Farm). The Resource Agencies will require justification for allocation of project mitigation funds and will need to reach consensus on the wetlands mitigation package. Chris Waszczuk added that USEPA and ACOE require documentation of function and value of the wetland resources impacted along the corridor, and the function and value of the wetlands proposed as mitigation.

With respect to the Tuttle Farm, Marcia responded that there is a willing owner, and a Purchase and Sale Agreement has been executed. The opportunity for conservation/mitigation is at hand for a unique resource – the Tuttle Farm is the oldest farm in New Hampshire, having been operated by 11 generations of the Tuttle family. Chris Cross noted that the farm's proximity to the study area is an advantage. Tom Fargo inquired as to the level of wetlands analysis. Pete Walker responded that a detailed field review of the farm property had been conducted on all of the farm parcels. Tom noted that there are flagged wetlands on the site, and there may be more wetlands on the site than previously depicted. Pete suggested contacting the owners to obtain the latest information. Marcia offered to follow up or request that the SRC follow up with the owner.

Chris Waszczuk stated that the City is supportive of the proposed mitigation at Tuttle Farm and has requested NHDOT to refocus on this site as the priority mitigation site in Dover. He added that he was wary of placing all the mitigation effort at this one site, and that it may be more prudent to share wetlands mitigation between the Tuttle Farm and the Blackwater Brook area. Tom Fargo estimated that 60 to 70 acres of preservation would be required to offset the wetland impacts in Dover. Marcia stated that it would be preferable to preserve the entire site (approximately 125 Ac); she noted the urgency of the situation – the additional acres could be sold tomorrow. Chris Waszczuk noted the need for consensus from the Resource Agencies prior to commitment of project funds to the farm preservation. He added that the resource agencies had reached consensus on the Blackwater Brook area; now we will be asking them to revisit that decision. Tom reiterated that if there are more wetlands on the Tuttle Farm than previously estimated, the justification to the RA's for switching priorities will be strengthened. Tim Roache offered the SRPC as a facilitator for hosting the next (February) RA meeting in Dover. Chris Waszczuk reiterated that NHDOT supports mitigation at the Tuttle Farm, but he is anxious about the risk involved in placing all the mitigation funding at one location. Bill O'Donnell suggested requesting a field walk of the Tuttle Farm with the resource agencies, and then a comparison of the sites (Tuttle Farm and Blackwater Brook). Cliff Sinnott asked if there were other potential funding sources for mitigation at the Tuttle Farm. Marcia responded that City sources were expended, and offered that there were advantages to using as few funding sources as possible. Additional funding sources typically result in additional monitoring requirements that could potentially impact the desire to keep the Tuttle property a working farm. Chris Cross asked if the City was asking, or interested in the Town of Newington waiving its mitigation funds and allocating those funds to Dover. Marcia replied, no, and Pete Walker stated that there is a need/preference to mitigate in the watershed areas of impacts. Cliff suggested that the leveraging of additional funds would allow greater mitigation and a feeling of accomplishment to be shared by more stakeholders. Marcia countered that more funding sources result in more site monitoring requirements which will burden farm operations. The City of Dover would prefer to use other funds, if available, on other potential sites. Tom Fargo noted that some organizations might aim their funds

at conserving resources with unanticipated consequences. For example, LCHIP's public access requirements can infringe on private property.

Chris Waszczuk closed the discussion by summarizing that Dover preferred to focus on the Tuttle Farm as the priority for mitigation, and that Blackwater Brook was the secondary site (if the Tuttle Farm mitigation effort is unsuccessful, or if the mitigation credit from the Tuttle Farm does not independently satisfy the requirements). Tom Fargo stated that the Dover Open Land Committee and Conservation Commission prefer the Tuttle Farm, and he assumes that NHDOT could participate in the Tuttle Farm preservation with some remaining mitigation funds for Blackwater Brook. Chris cautioned that one needed to remember that the cost of mitigation at Tuttle Farm ($/Ac) would likely be more expensive than the Blackwater Brook area, which must be factored into estimating the remaining funds for additional mitigation.

Chris Waszczuk then reminded all that March 2006 has been targeted for publication of the DEIS, with the Public Hearing targeted to follow in May/June 2006. He noted the need for a location to host the public hearing that could seat up to 150 people, had additional space for tables, boards, plans and exhibits, and could support a PowerPoint presentation. He expressed concern over Dover City Hall (Auditorium) due to daylight intrusion effects on the presentation; he also expressed a desire to hold a single public hearing. Bruce Woodruff offered that Newington Town Hall would work and be a relatively easy commute (southbound) at 6:00 PM in comparison to a northerly commute along the Turnpike at that time period. Chris Cross confirmed that Newington Town Hall could accommodate the public hearing. Mike Dugas noted that NHDOT would provide the audio system. Tom Fargo suggested that a middle school auditorium in Dover might also work, but upon further discussion, the layout of space and seating was deemed infeasible. Steve Stancel suggested a neutral location be held instead of the Town or City Halls. In answer to a question, Chris Waszczuk indicated that the hearing location would be open to the public from approximately 4:00 PM to 7:00 PM to review plans and discuss the project with the project team. The hearing itself, would run from 7:00 PM to approximately 10:00 PM. He asked if there were any further comments or questions, and if the ATF felt there was a need for another ATF meeting. The feeling was that another meeting prior to the public hearing was unnecessary.

Chris Cross stated that ATF representatives have worked very hard with the design team to craft the preferred alternative. He noted that a successful public hearing is critical to project implementation, and that it is incumbent on the ATF representatives to bring out supporters to the public hearing, and to speak up at the hearing in support of the project. He anticipates that a well-organized business owner will oppose the project and could make a lot of noise at the hearing. Jack Newick added that he concurred with Chris – the ATF needs to generate supporters at the hearing and speak up. He added that in his experience, he has seen a vocal minority derail a project because the majority of supporters elected to stay home. Chris Waszczuk added that the public hearing is a critical project milestone. The communities and regulators need to hear the actual story of project development. He stated that the ATF has been great to work with and that Chris Cross' points were well taken. Bruce Woodruff offered that the EIS process has been well done, the Dover City Council is very supportive of the project, and the ATF has well represented the City's issues and concerns.

There being no further comments, the meeting adjourned at 8:25 PM.

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE MEETING (ATF) MEETING
DOVER CITY HALL
JANUARY 18, 2006

Name BRUCE WILLBURN
Affiliation CITY OF DOVER
Address 288 Central Ave.
Dover, NH 03820

Phone /Email 516 6008 /

Name Joe Mercik
Affiliation Newicks Lobsters
Address 431 Dover Point Rd
Dover N.H.

Phone /Email /

Name Tim Roberts
Affiliation SRPC
Address 2 Ridge St
Dover NH 03820

Phone /Email 742-2523 / TRoberts@strafford.org

Name Pete Walker
Affiliation VHB
Address Bedford

Phone /Email 644-0888 / pwalker@vhb.com

Name Tom Fargo
Affiliation SRPC
Address 14 Cobble Hill Dr
Dover

Phone /Email 743-4290 / tomfargo@tlc.net

Name
Affiliation
Address

Phone /Email /

Name Marcia Colbath
Affiliation Chair Dover Open Lands
Address 114 Garrison Rd
Dover

Phone /Email 534-2723 / mjcolbath@comcast.net

Name
Affiliation
Address

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
ADVISORY TASK FORCE MEETING (ATF) MEETING
DOVER CITY HALL
JANUARY 18, 2006

Name MICHAEL DUEAS
Affiliation NHDOT
Address
Phone /Email /

Name MARC LAURIN
Affiliation NH DOT - BOE
Address
Phone /Email /

Name STEVE PARKINSON
Affiliation CITY OF PORTSMOUTH DPW.
Address
Phone /Email /

Name Leon Kenison
Affiliation PDA
Address 360 Corporate Dr. Portsmouth 03801
Phone /Email 603-766-9292 L.Kenison@peaceda.org

Name STEVEN STANCEL
Affiliation City of Dover
Address City Hall 288 Central Ave Dover NH.
Phone /Email 516-6008 /S.Stancel@ci.dover.nh.us

Name CLIFF SMITH
Affiliation RPC
Address 156 Water St Exeter NH 03833
Phone /Email 603 778 0885

Name Cody + Carole Cartwick
Affiliation
Address 53 Boston Harbor Road Dover, NH
Phone /Email 603-742-8689 /

Name
Affiliation
Address
Phone /Email /

Appendix B2 – Scoping, Public Informational, and Officials Meetings

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: See List

Date/Time: June 25, 2003
4:00 pm

Project No.: 51425

Place: Newington Town Hall

Re: Newington-Dover, 11238
Scoping Meeting

Notes taken by: Peter Walker
Frank O'Callaghan

Chris Waszczuk opened the meeting by welcoming the attendees and introducing himself as Project Manager and representing the NHDOT, Bill O'Donnell representing FHWA, the lead federal agency, and Pete Walker and Frank O'Callaghan from VHB, consultant to the NHDOT. He reviewed the meeting agenda, reminded attendees of the handout package which includes copies of the PowerPoint slide presentation, study area maps and the project's purpose and need statement. He stated that the presentation would take approximately 60 minutes, and requested that attendees hold their questions and comments until the presentation was complete. Chris then explained the purpose of the Scoping Meeting: to confirm the project study area; to discuss the study framework and potential impacts that warrant study; to define a reasonable range of alternatives; and to receive public input.

Bill O'Donnell then described the FHWA role as the lead federal agency. Given the nature of the project and the eligibility for federal aid, FHWA would have federal oversight responsibility for preparation of the Environmental Impact Statement (EIS) in conformance with the requirements of the National Environmental Policy Act (NEPA). The EIS will address social as well as economic and environmental impacts. Bill mentioned a number of federally regulated resources including: public parks, recreational areas, wildlife/waterfowl refuges, historic resources, wetlands, navigable waterways, floodplains, farm lands and air quality. He also identified a number of agencies requested to be federal and state cooperating agencies for the project, including: US Army Corps of Engineers, US Environmental Protection Agency, US Fish and Wildlife Service, National Marine Fisheries Service, NH Office of State Planning, NH Fish and Game Department, NH Division of Historical Resources, and NH Department of Environmental Services.

Frank O'Callaghan then discussed the project background. He referenced the Route 16 Corridor Protection Study (1998) and the Newington-Dover Spaulding Turnpike Feasibility Study (2000) which both identified the current and future need for traffic operational and safety improvements to the Turnpike between the Dover Tollbooth and Exit 1 (Gosling Road and Pease Boulevard) in Newington. He described the Turnpike corridor between the Dover Tollbooth and Exit 1 by referring to a number of aerial photographs. He stated that 1980 average daily traffic volume

(30,000) on the Little Bay Bridges had more than doubled (70,800) by 2002. The increase in reported study area traffic accidents was more dramatic – 957 accidents within the 1997-2001 five year period, as compared to 575 accidents during the 1992-1996 five year period. He summarized 1996 peak hour traffic conditions as capacity constrained at Exits 3 through 6 due to both traffic volumes and substandard roadway geometry. He then referred to a series of current – June 2003 – aerial photographs of weekday AM and PM peak hour traffic flows which demonstrated AM congestion north of Exit 4 (Nimble Hill Road), across the bridge and through the Exit 6 interchange area to the Dover Tollbooth. Due to a minor accident in the vicinity of Hilton Park during the PM peak hour, northbound traffic was constrained to a rolling queue of vehicles which stretched back across the Little Bay Bridges to Exit 3 (Woodbury Avenue) and beyond. In both AM and PM peak hours, traffic flowed freely north of the Dover Tollbooth.

Frank described an Interim Safety Plan that will improve traffic operations and safety conditions in the Exit 4 (Nimble Hill Road/River Road) area by eliminating a number of traffic weaving conflicts and improving on and off-ramp geometry. The interim plan was a short- term recommendation of the Spaulding Turnpike Feasibility Study, and is currently under design. Frank concluded with a summary of study area issues and opportunities – identified by previous studies, local officials, regional planning officials, Advisory Task Force Members, and residents – which will form the context within which a long- term smart transportation solution will evolve. Some of those issues and opportunities include: evaluation of Exit 2/Fox Run Road interchange operations; future access to the Pease Tradeport, including a rail connection; changes in land use such as redevelopment of the Newington drive-in theatre; substandard deceleration, acceleration and traffic weaving conditions at Exit 4; use of the Turnpike as a local service road to reverse direction; stormwater management and water quality; coastal wetlands and floodplain areas; marine habitat and ecology; bicycle and pedestrian system connectivity; Little Bay Bridges' related deficiencies such as lack of shoulders, vertical alignment which limits driver sight distance, and the need for seismic retrofitting; General Sullivan Bridge considerations which include future use, long term maintenance and historic issues; Hilton Park related issues such as access, connectivity and boat ramp expansion; potential noise mitigation for businesses and residents located along Boston Harbor Road and in proximity to Exit 6 and Dover Point Road; and the transportation system constraint of two lanes across the Scammell Bridge and along US Route 4.

Chris Waszczuk then discussed the project purpose to improve transportation efficiency and reduce safety problems along this 3.5 mile segment of the Turnpike. With respect to the need for improvements, he noted that the Turnpike was a major limited access highway, linking the seacoast region with I-95, Concord, the Lakes Region and the White Mountains. The Turnpike is a principal arterial and part of the designated National Highway System; it is a major route for commuters, commerce and tourists. Traffic volumes have grown from approximately 30,000 vehicles per day (vpd) in 1980 to 70,000 vpd in 2001; traffic volume is projected to increase to approximately 100,000 vpd by 2025. The Turnpike currently is over capacity (level-of-service F) and is further characterized by substandard bridge and roadway geometry – bridge shoulder width and profile, and merge, diverge and weaving areas of Exits 3 through 6. Peak hour traffic congestion is severe and traffic accidents have substantially increased during the last 10 years. Due to the nature of the facilities in the area for which no other viable routes exist, crashes result in long delays. The Turnpike bisects residential, recreational and commercial areas and impedes connectivity for pedestrians, bicyclists and motorists. Chris also noted that the Little Bay Bridges were major structures which were not designed and constructed to current seismic Performance Category B requirements.

Chris concluded by noting that the proposed Turnpike improvement project was included in the State's Ten Year Transportation Improvement Program and is a long- term transportation priority of the Seacoast MPO. As regional development has occurred and traffic volume has grown along

the Turnpike, traffic operations have degraded resulting in increased vehicle delays, increased traffic accidents and potential loss of commerce.

Peter Walker then presented a summary of the project study area. He reviewed a map of the proposed study area, explaining that the EIS will consider information not only from the immediate vicinity of the highway but also from a corridor approximately one mile wide. Areas in Newington to be studied include portions of the Pease Tradeport, land accessed by Nimble Hill Road, as well as the industrial and commercial lands to the east of the Turnpike. In Dover, the study area includes the portion of Dover Point west to the Scammell Bridge, north to a point just south of the Dover Tolls, and east to include the residential neighborhoods south of Roberta Drive.

Mr. Walker also summarized the list of sensitive environmental issues that would be addressed in the Environmental Impact Statement:

Natural Resources associated with the Great Bay Estuary

- ✓ Marine Habitat: All intertidal and submerged habitats in the vicinity of the existing bridges will be mapped with the assistance of the UNH Jackson Estuarine Laboratory.
- ✓ Coastal and Freshwater Wetlands and Wildlife Habitat: Will be mapped and evaluated in the field.
- ✓ Threatened and Endangered Species: Identified through coordination efforts with the NH Natural Heritage Inventory, the NH Fish and Game Department, and the US Fish and Wildlife Service.
- ✓ Floodplains: Based on FEMA mapping supplemented as needed.
- ✓ Water Quality: Focus centered on stormwater impacts.

Other Environmental Issues

- ✓ Air Quality: Conduct a hotspot analysis for CO emissions.
- ✓ Noise: Take traffic modeling results to predict noise levels under build and no-build scenarios.
- ✓ Hazardous Materials: Inventory known contamination sites in the corridor.
- ✓ Visual Character: Consider how reconstruction might affect scenic character of the Little Bay area.
- ✓ Farmlands: Although not substantial active agriculture, prime farmlands are present.

Cultural and Social Resources

- ✓ Socio-economic effects: Can be direct or indirect/cumulative. To be modeled using the REMI model with RKG Associates assistance. Indirect effects analysis to include as many as 32 towns as depicted in socioeconomic study area map.
- ✓ Historic Architecture: Consider all structures greater than 50 years old to determine eligibility for listing on the National Register of Historic Places. General Sullivan Bridge is most conspicuous element. US Coast Guard has asked for Gen. Sullivan Bridge to be removed due to its hindrance on navigation.
- ✓ Archeological Resources: Study area to be surveyed for archeological sensitivity.
- ✓ Recreational Areas: Particular attention to public parks, etc. Hilton Park most obvious example, with boat launch and other recreational facilities.

Mr. Walker then turned the presentation over to Frank O'Callaghan, who provided a summary of the project alternatives. Frank enumerated a range of possible alternatives:

- No Build
- Transportation System Management (TSM) Improvements
- Transportation Demand Management (TDM) Measures

- Upgrade Corridor
- Combination of Above

The No Build Alternative is required to be analyzed as part of the Environmental Impact Statement (EIS) and is essentially a continuation and perpetuation of existing conditions and shortcomings of the current transportation corridor. The existing infrastructure would be maintained without any improvements or changes in travel characteristics. As such, the No Build Alternative serves as a baseline condition for comparison with other alternatives.

TSM Improvements are typically low cost measures to reduce congestion and improve safety. They are generally limited by existing right-of-way and might include small- scale improvements such as constructing turning lanes at intersections, restriping lane uses or installing traffic signals or roundabouts to improve traffic control. Frank referred to the previously described Interim Safety Plan at Exit 4 in Newington as a larger scale TSM-type improvement which is being pursued.

TDM Measures focus on reducing the travel demand on the transportation highway corridor. Such measures could include: bus service, passenger rail service, park-and-ride facilities, ride sharing programs, telecommuting, parking restrictions, work hours management (such as shift staggering and flexible work hours), and high occupancy vehicle (HOV) lanes. The suitability and potential effectiveness of these measures to be effective in reducing travel demands along the Turnpike will be evaluated as part of the EIS.

With respect to upgrading the corridor, Frank stated that in light of the sensitive environmental resources within the study area, new corridor alternatives would not be considered. Little Bay Bridge alternatives could include:

- widening/rehabilitating the existing bridges to provide 3 or 4 lanes in each direction;
- rehabilitation of the existing bridges in concert with construction of a new bridge to collectively provide 3 or 4 lanes in each direction;
- replacement of the existing bridge with new bridges to provide 3 or 4 lanes in each direction.

General Sullivan Bridge alternatives could include:

- rehabilitation for local traffic;
- rehabilitation for only bicyclists and pedestrians;
- bridge replacement for local traffic and bicyclists and pedestrians;
- bridge removal.

Corridor Upgrade alternatives could also include widening of the Turnpike main line to provide 3 or 4 lanes in each direction and reconstruction of the interchanges. Frank concluded by stating that a Combination of Alternatives, i.e. TSM and TDM and Corridor Upgrade, may also be considered.

Chris Waszczuk then described the five (5) phases of the EIS framework and process:

Phase 1 – Project Scoping/Date Collection/Issue Identification
Phase 2 – Conceptual Alternative Development and Screening
Phase 3 – Preliminary Design/Impact Assessment/Draft EIS
Phase 4 – Public Hearing
Phase 5 – Final EIS

Current Phase 1 activities include:

- collection of data
- base mapping
- assessment of existing conditions
- identification of the affected environment and issues of concern
- establishment of the project purpose and need
- projection of future travel demands
- identification of a range of potential alternatives
- preparation of the Scoping Report document

Phase 2 activities will include:

- refinement and evaluation of potential alternatives
- screening of alternatives and development of a constraints matrix
- development of a reasonable range of alternatives
- preparation of the Rationale Report document

The elements of Phase 3 include:

- refinement and further development of reasonable alternatives
- assessment of impacts
- identification of a preferred alternative
- identification of mitigation
- preparation of the Draft EIS document

Phase 4 involves the Public Hearing process and includes:

- submittal of federal and state permit applications
- conducting the Joint Public Hearing (ACOE, FHWA, NHDOT and NHDES)
- preparation of the Report of the Commissioner
- issuance of the Special Committee Report

Phase 5 constitutes the Final EIS process and includes:

- confirmation of the Least Environmentally Damaging Practicable Alternative (LEDPA)
- approval of the Mitigation Package
- preparation of the Final EIS document

Following the FEIS publication, Regulatory Agency permits are expected to be received; FHWA Record of Decision (ROD) issued; and the ACOE permit procured.

Chris then summarized the Project Schedule:

Phase 1: February 2003 – December 2003
Phase 2: January 2004 – August 2004
Phase 3: September 2004 – November 2005
Phase 4: February 2006 Public Hearing
Phase 5: March 2006 – December 2006
FHWA Record of Decision: March 2007
Final Design: March 2007 – October 2011
Construction: October 2008 – June 2014

He then reviewed the Public Participation process which includes an Advisory Task Force (ATF); Public Informational Meetings; meetings with the Resource Agencies; and a newsletter during each phase of the study. In addition, a project website – www.newington-dover.com to help disseminate information has been set up. The public hearing will also provide a formal avenue to offer public input. Chris noted that the next meeting of the ATF was scheduled for 6:30 PM, July 30, 2003 at Dover City Hall, and encouraged all in attendance to check out the project website. He stated that minutes of this evening's meeting as well as the PowerPoint presentation would be posted on the website.

Chris closed the presentation by identifying Bill O'Donnell, FHWA, Bill Hauser, NHDOT and himself as contacts for public feedback and information; and by thanking attendees for their attention and interest. He then opened the floor for questions and comments at approximately 5:10 PM.

Chris reviewed the meeting agenda, soliciting questions or comments on the meeting purpose, the role of the Federal Highway Administration, the project background, or the project Purpose and Need. No one in attendance had any questions or comments on those areas.

Two questions were asked regarding the study area:

John Burke, representing the City of Portsmouth, commented that there was on-going study to address the Portsmouth traffic circle and Route 1 Bypass. He inquired as to the coordination of the studies. He also pointed out that Woodbury Avenue runs parallel to the Turnpike and currently shares traffic demands with the Turnpike. Mr. Burke noted that the current study area does not include the Portsmouth section of Woodbury Avenue and questioned how the study could effectively evaluate alternatives without looking at Woodbury Avenue.

Chris Waszczuk replied that the EIS will, in fact, analyze a portion of the Woodbury Avenue. Frank O'Callaghan added that Woodbury Avenue would be studied from Exit 3 southeast to the Gosling Road intersection and that the study would identify traffic impacts at that intersection including the northwest Woodbury Avenue approach in Portsmouth. Frank also stated that the Portsmouth Traffic Circle study and the Newington-Dover study would utilize the same regional travel demand model in projecting future travel demands. John Burke commented that he felt that the study would benefit if it were expanded to assess Woodbury Avenue south from Gosling Road to Market Street Extension. He felt such an analysis would help the study better address the Purpose and Need for the project. Chris responded that NHDOT would take his request under consideration.

Tom Fargo, a member of the Project Advisory Task Force representing the Strafford Regional Planning Commission, asked why the study area was limited to the middle of the Scammell Bridge. He felt that limiting the study area in such a way would fail to recognize traffic constraints on the north side of the Scammell Bridge. In terms of the natural resources, the study area map implies that only half of the Bellamy River will be studied.

Chris Waszczuk replied that the study area is limited in this way because previous Hearings held for the Scammell Bridge project limited the bridge and approaching highway to a two-lane section. Therefore changes to the bridge are viewed as beyond the scope of the current project. Peter Walker added that since no changes to the Scammell Bridge were contemplated under the current project, no direct impacts to the Bellamy River were anticipated. Chris added that hydrodynamic modeling would allow extrapolation of data to other locations for tidal elevation impacts, if necessary.

Not hearing any further questions on the study area, Chris Waszczuk turned the discussion to the subject of sensitive environmental issues.

The first comment came from Barbara Ridolfi, resident of Dover Point. Mrs. Ridolfi asked when the local residents could expect to provide input on the planning of the project. She was concerned that the notification of the present meeting was not adequate, and stated that many residents of the area were unaware of the meeting. Chris Waszczuk replied that public involvement is a major emphasis of the NEPA process. He stressed that the Department is in the very beginning stage of the project and that there would be numerous public informational meetings over its duration. He also pointed out that there was opportunity for the public to obtain information through a project web site, including an area for public comment. Chris explained that there is a procedure for requesting one's name to be added to a project mailing list, ensuring that the Department will issue individual notification of future meetings.

In response, one attendee stated that he believed that everyone in the Dover Point area should be notified, and that the Department should be issuing a blanket notification to every property owner in the study area. He suggested that following the initial notice, responsibility for maintaining involvement would rest with the resident. Charles Garabdian asked why he was notified when others in his neighborhood were not. Chris Waszczuk replied that Mr. Garabdian had received a notice because he had specifically requested to be added to the project mailing list prior to the meeting.

Tom Morgan, Newington Town Planner, commented that the turnout for the scoping meeting was good, but suggested that the turnout would have been even better had the meeting been held in the evening. Chris Waszczuk replied that the meeting was scheduled at 4:00 PM because Scoping Meetings generally focus on a discussion with the resource agencies. The meeting was therefore scheduled in the late afternoon for the convenience of these public officials. Chris observed that all of the future public information meetings would be held in the evening so that they are more convenient for the public.

Cynthia Copeland of the Strafford Regional Planning Commission (SRPC) listed two concerns: The first related to the Purpose and Need that was distributed with the meeting handouts. Cynthia explained that the Purpose and Need does not address the aesthetics of the area or its environmental sensitivity. She suggested that the project area serves as a gateway to the lakes and mountains of New Hampshire and that should be reflected in the Purpose and Need Statement. As a second concern she explained that many in the communities to the north and west of the project area are concerned about the effects of this project, particularly as they may relate to changes in development pressures and travel patterns.

Chris Waszczuk asked Cynthia to send any ideas that she had for revising the Purpose and Need statement to him in writing. Chris introduced Jim Hicks of RKG Associates (an economist who is assisting with the study) and asked Jim to reply to Cynthia's concerns regarding the socio-economic effects on the project. Jim Hicks explained the basis for the socio-economic study, which would identify patterns of growth under both a No-Build scenario and under an improved roadway system. He explained that the economic model analysis would play into the decision as to which alternative was selected. Peter Walker further explained that the socio-economic study area had been recently expanded to include the four northern-most communities in the Seacoast MPO including New Durham, Middleton, Brookfield, and Wakefield in response to concerns expressed by the Strafford Planning Commission on this subject at the previous ATF meeting.

Brian Mazerski of the Office of State Planning (Coastal Program) commented that the Fish and Game Department is currently planning to change the boat ramp at Hilton Park. He suggested coordination with Fish and Game Department be undertaken with regard to this issue.

A resident of Dover Point Road explained that she was considering making improvements to her historic home and asked whether she should actually make the improvements or hold off until the study was completed. Chris Waszczuk pointed out that the project time line is extended out over several years and that a final decision on the preferred alternative and its property impacts will not occur for quite some time.

Rich Roach of the U S Army Corp of Engineers commented that many areas along the shoreline in the study area were actually filled wetlands. Rich requested that the Department undertake a study of the historic changes in the shoreline to identify possible areas for environmental restoration to mitigate for any wetland impacts.

A resident questioned why the Dover tollbooth is not included in the study since he observed many near and actual accidents as a result of the tollbooth.

Chris Waszczuk explained that there were several reasons for not including the Dover tollbooth in the current study. First, the Route 16 Corridor Study (which had been described earlier during the evening's presentation) predicted that the turnpike would operate at an acceptable Level of Service north of the tollbooth well into the future. Chris also pointed to the aerial photographs which had been viewed during Frank O'Callaghan's presentation as evidence that the highway operates in a free flowing condition north of the tollbooth even when portions of the Turnpike and Little Bay Bridges are extremely congested. Furthermore, Chris explained that the toll issues are a major statewide policy issue. He explained that a study, recently completed on the toll system,has indicated that the elimination of tolls would require an increase in the gasoline tax or another revenue source to offset the loss of toll revenue, and that the state legislature to date has not had the political will to eliminate the tolls.

Several residents replied that, in their opinion, the tollbooths are a major issue. One resident stated that as the tolls were raised in the past, more traffic was diverted onto Dover Point Road causing increased traffic concerns for their neighborhood. Chris Waszczuk replied that he understands that tolls are a major issue across the state. Dover is not the only community in the state that has to deal with the issue. Chris suggested that people who are interested in the issue attend the July 30th meeting of the Advisory Task Force. At that meeting, representatives from the Bureau of Turnpikes will be discussing the toll study and the issue of the tolls.

A resident asked whether loss of property value is considered in making a decision about the project and what, if any, compensation is available for property depreciation? Peter Walker replied that property owners are compensated fair market value for any property that is needed for new right-of-way and that the Department of Transportation has a program in place to assist property owners through that process. He explained that the study would measure the number of property takings, which will be a key element of the alternatives analysis. He stressed that direct property takings are certainly not the only variable upon which an alternative might be selected. It is, however, a consideration that is weighed heavily in the alternatives analysis. Chris added that, in his experience, as mobility increases due to infrastructure improvements, property values generally increase over the long term.

A local resident stated that the noise from the highway was a major issue and that, in his opinion, the tollbooths should be eliminated.

Charlene Weed, a resident of Dover Point, explained that her home is located next to the Seacoast Furniture Store. She asked whether her property is within the study area boundaries. Peter Walker replied that her property appeared to be within the study area.

Another resident inquired as to the deadline for submitting written comments and will written comments have the same weight as the verbal comments expressed at the Scoping meeting? Chris replied the written comments would receive equal weight and could be submitted during the next month or two.

Barbara Ridolfi asked Jim Hicks whether there was a property value below which a property taking is considered "insignificant."

Jim Hicks replied that no such threshold exists. Mr. Hicks explained that he had been involved in 10 to 12 previous environmental impact statements and stressed that, in his opinion, the Department of Transportation takes serious consideration of the property impacts of its project. In further reply, Frank O'Callaghan explained that the EIS is an exercise in balancing all of the various public benefits and environmental issues. The proposed alternative will need to minimize impact on the environment and local property owners. Mr. O'Callaghan stressed that in addition to meeting the project purpose and need, the proposed alternative would need to be practical, affordable, must meet the requirements of the regulatory agencies, and must also be supported by the community. Frank pointed out that the project would not go forward unless all five of those requirements were satisfied.

Barbara Ridolfi explained that the neighborhoods of South Dover on Dover Point had been thought of in the past as one of the prime areas in Dover. She explained that she was very concerned that over time this quality of life had been eroded by the highway and tollbooths. She explained that the highway has created noise problems and has detracted from the area's scenic quality.

Bill O'Donnell replied that in certain cases noise barriers or visual barriers might be erected to help mitigate for noise or negative visual effects. Charlie Hood with the Department's Bureau of Environment explained the analysis that the Department would conduct to evaluate noise impacts explaining that noise levels in the future under both the Build and No-Build Alternatives would be evaluated. If predicted noise levels exceed a 66-decibel threshold, then the appropriateness and cost-effectiveness of a noise barrier would be evaluated.

Dominic Ridolfi stated that he had already seen preliminary designs for the highway improvements. Yet the information provided by the Department today suggested that the design would not occur until Phase III of the project. He asked whether the design was already completed.

Chris Waszczuk replied that the design had not yet been initiated. The information that Mr. Ridolfi had seen was from the 2000 Feasibility Study. That study was conceptual in nature and did not account for detailed conditions in the field, nor did it contain a detailed environmental analysis. The EIS study will build upon the information contained in the Feasibility Study but would develop a much more in depth analysis of study area conditions and eventually develop its own set of alternatives and recommendations.

Mr. Ridolfi explained that his review of the Feasibility Study showed a new road through existing historic structures. He inquired about the process for historic preservation. Chris Waszczuk explained the Department's approach to historic preservation is to first avoid any impacts if possible. If impacts are unavoidable, they need to minimized and/or mitigated. NHDOT consults with the state historic preservation officer and others in the preservation community to decide on mitigation for any unavoidable impacts.

Barbara Ridolfi asked rhetorically which "team" she should join to have the most influence on the project: the historic preservationists, the environmentalists, or another "team."

Chris Waszczuk replied that she should stay involved in the issues that concern her most. Chris asked those in attendance whether they believed that there was a need for the project. The majority of the people in the room indicated that they agreed with project purpose and understood that the highway and bridges need to be upgraded.

An attendee commended the Department for the fine presentation. It obviously reflected a great deal of thought and hard work. She commented that the Department had provided a great deal of information and had provided handouts, which she found helpful.

Frank O'Callaghan encouraged all of those in attendance to stay involved in the project throughout its duration. He suggested that strong public involvement would result in a smart transportation solution.

A comment from the audience suggested that the Department would need to make better notification to encourage public involvement. The woman inquired as to whether the Department intended to notify all property owners in the future. Chris Waszczuk replied that it was impractical to provide individual notification to everyone in the project corridor, given the Department's limited resources. He suggested that anyone who wanted individual notification of future meetings request to be placed on the mailing list through the project web site or by contacting him. Mailing list members will be notified of future meetings at least one week in advance.

A resident inquired as to how one would sell property that might be affected by the project, given the current project status and uncertainty with respect to potential property impacts. Chris responded that, unfortunately, the affected properties would not be determined until the public hearing.

Hearing no further questions, Chris Waszczuk closed the meeting at approximately 6:15 PM.

MEETING SIGN-UP SHEET

PROJECT Newington - Dover: Spaulding Turnpike improvements from exit 2 to Dover toll

LOCATION Newington Town Hall

PROJECT NO. NHS-027-1(37) (Federal) 11238 (State)

Name	Agency / Address	Comments
ARTHUR J. DuBois	ABUTTOR	
Joyce Mackey	Abutter	
Mel Jenkins	Lee NH	
P. S. Jenkins	Lee - NH	
M. E. Tallanshee	Dover, NH	
E. M. Strawbridge	Dover, NH	
H. E. Tallanshee	Dover, NH	
Jameson Paine	CLD	
BRIAN MAZERSKI	NH COASTAL PROGRAM Portsmouth	
Liz Chamberlain	Senator Sununu	
Dave Holden	Portsmouth	
John W Hynes	Portsmouth	
Michael Cox	Foster's Daily Democrat	
John Burke	City of Portsmouth	
Jane Slinger	Dover NH	
Bruce Woodruff	Dover NH	
Cecile Poliquin	Dover NH	
Terry Edison	Dover NH	

Sheet 1 of 4 Date June 25, 2003

EIS Scoping Meeting

EETING SIGN-UP SHEET

PROJECT Newington - Dover: Spaulding Turnpike improvements from exit 2 to Dover toll

LOCATION Newington Town Hall

PROJECT NO. NHS-027-1(37) (Federal) 11238 (State)

Name	Agency /Address	Comments
GINO INFASCELLI	NH DES	
VERN STRAUBEL	DOVER DPW	
Jim Sconyers	Seacoast Sierra Club	
Barbara & Don Ridolfi	5 Pinewood Dr	
Elinor George	7 Pinewood Dr	
[illegible]	[illegible]	
Kevin Smith	10 Homestead	
Tom Morgan	Town Newington	
KEVIN DUFFY	4 HOMESTEAD, DOVER	
Bill Neidermyer	USFWS	
Ray Josselyn	Dover	
Leonard Silver	Dover	
Peggy Lamson	Newington Conservation Comm	
Chris + Richard Asquith	Dover Pt. Rd.	
Thomas Fargo	SRPC - Dover	
Christina Altimari	NH DES - Wetlands	
DUNG LE	[illegible]	

Sheet 2 of 4

Date June 25, 2003

EIS Scoping Meeting

MEETING SIGN-UP SHEET

PROJECT Newington - Dover: Spaulding Turnpike improvements from exit 2 to Dover toll

LOCATION Newington Town Hall

PROJECT NO. NHS-027-1(37) (Federal) 11238 (State)

Name	Agency / Address	Comments
Sen Iris Estabrook	District 21, Dover...	
Maria Stowell	Pease Dev Auth	
Scott Hilton	NH OES	
CHARLES GARABEDIAN	289 DOVER POINT RD.	
AN MAI	1 ~~HOMESTEAD~~	
Roy Greenleaf	Newington Fire Dist	
James Thompson	295 Dover Pt Rd	
Jesse DeGroto	Portsmouth Herald	
~~Sylvia~~ Moore	DPR Dover	
Jim Campbell	Town of Durham	
Rich Read	Army Corps EPA	
Mark Kern	Dover Fire + Rescue	
Perry Plummer	11 Homestead Ln	
Mike + Gigi Fall	335 Dover Pt. Rd.	
Matthew + Angela Carter		
LINDA WILSON	NH Div Historical Resources	
Floyd McLaughlin	DOVER PT	

Sheet 3 of 4

Date June 25, 2003

'EETING SIGN-UP SHEET

PROJECT Newington - Dover: Spaulding Turnpike improvements from exit 2 to Dover toll

LOCATION Newington Town Hall

PROJECT NO. NHS-027-1(37) (Federal) 11238 (State)

Name	Agency / Address	Comments
SCOTT BOGLE	RPC	
Chris CROSS	Newington PB	
Charlene Weed	Dover PT	
Dorothy Watson	Newington	
Jon Schmoyer	Dover PT	
Cynthia Copeland	SRPC	

Sheet 4 of 4

Date June 25, 2003

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Waszczuk, NHDOT
Marc Laurin, NHDOT
Mike Dugas, NHDOT
Bill O'Donnell, FHWA
Frank O'Callaghan, VHB
Peter Walker, VHB
Steve Lawe, RSG
Members of the Public (See Attached List)

Date/Time: November 12, 2003
7:00 PM

Project No.: 51425

Place: Dover City Hall

Re: Newington-Dover, 11238
Public Informational Meeting

Notes taken by: Peter Walker

At 7:00 Chris Waszczuk, Project Manager for the NH Department of Transportation (NHDOT), called the meeting to order. He introduced Frank O'Callaghan and Pete Walker from VHB, and Steve Lawe from RSG as members of the consultant team who would assist the Department in the evening's presentation. Chris also introduced Bill O'Donnell from FHWA and suggested to attendees that they could contact either Bill or him after the meeting to follow-up on any project related issues (a meeting agenda with contact information was distributed). He also suggested that the project website, www.newington-dover.com, was an excellent means of staying informed and offering comments.

Chris then reviewed the agenda and purpose of the public informational meeting which included a review of the project's scope and study area, a review of existing study area traffic conditions and environmental resources, and review of the project's purpose and need. He noted that a Scoping Report was being prepared to summarize these items and would document Phase 1 of the project's Environmental Impact Statement (EIS). He then stated the primary purpose of the project is to improve transportation efficiency and to reduce safety problems for an approximately 3.5 mile long section of the Spaulding Turnpike beginning at the Gosling Road Interchange in Newington and extending across the Little Bay Bridges to the toll facility in Dover. He noted that the purpose and need statement is an important document within the EIS since it identifies why the proposed action is being pursued. It is also particularly important for those unfamiliar with the project and the study area. Chris then reviewed the project need citing the importance of the Spaulding Turnpike from commuter, commerce, and tourist perspectives; its designation as part of the National Highway System (NHS); and its function as a limited access highway linking the seacoast region with I-95, Concord, the Lakes Region and the White Mountains. He cited the historic growth of traffic and future projections, the poor levels of traffic service, existing geometric constraints and deficiencies and the history of traffic accident experience. Chris also

noted that the Turnpike bisects local residential, recreational and commercial areas, and that there exists a need for local connectivity of motorists, pedestrians and bicyclists. He stated that the Little Bay Bridges were major structures located on an important highway in a moderate seismic area and not designed to meet the current seismic criteria for this region. He concluded by noting that the Newington-Dover Spaulding Turnpike project was included in the State's Ten-Year Transportation Improvement Program and was the highest long-term transportation priority of the Seacoast Metropolitan Planning Organization. He noted that as the area continues to develop and future traffic volumes increase, traffic operations and safety conditions would worsen. Chris then asked Frank O'Callaghan to review the project background.

Frank began by describing the project study area as extending north from Exit 1 (Gosling Road/Pease Boulevard) of the Turnpike on the south, traversing the Little Bay Bridges to a point just south of the Dover Toll Plaza, and bounded by the Piscataqua River on the east and Little Bay on the west. He noted many study area issues such as marine habitat, navigation, water quality, tidal and surface wetlands, park and recreational activities, historic and cultural resources and potential residential and commercial property impacts. He cited previous studies – NH 16 Corridor Management Study (1998) and the Spaulding Turnpike, Newington-Dover Feasibility Study (2000) – which identified poor traffic operating conditions for the study area under current and future traffic volume conditions. Frank noted that current weekday peak hour capacity constraints extended from Exit 6 southbound to Exit 3 (Woodbury Avenue) in the morning, and from Exit 4N northbound through Exit 6 in the evening. These capacity conditions are compounded by a number of geometric deficiencies including substandard shoulder width on the Little Bay Bridges, substandard turning radii at many of the interchange on and off ramps, and inadequate weaving distances in both the northbound (River Road) and southbound (Nimble Hill Road) Exit 4N - Exit 4 area. He also noted that US 4 was capacity constrained during both the weekday AM and PM peak hours.

Study area traffic accidents during the 1997-2001 period (908 total) increased by approximately 58 percent in comparison to the previous 5-year, 1992-1996, period (575 total). During the 1997-2001 period, accidents increased at approximately 11 percent per year in comparison to the average annual traffic volume growth of 3 percent per year. The Little Bay Bridges are the highest accident location in the study area. Frank concluded his remarks on traffic operations and safety by referring to an interim safety improvement plan that has been developed to improve traffic and safety conditions in the Exit 4 – Exit 4N, Nimble Hill Road and River Road area. The plan has been endorsed by Newington officials and is scheduled for implementation in 2005.

Frank O'Callaghan then presented some preliminary bridge findings by contrasting the Little Bay Bridges with the General Sullivan Bridge. The Little Bay Bridges are characterized by substandard shoulder widths and a 3.5 percent grade which limits driver sight distance to a 60 mph design speed (design speed being the maximum safe operating speed governed by the vertical alignment or profile). The 2-lane bridges have minor deterioration and the substructure for both bridges – composed of reinforced concrete – was designed and constructed in 1966 prior to seismic resistance requirements.

Frank then enumerated several factors which would affect the rehabilitation alternatives for the General Sullivan Bridge. A 4 percent grade limits driver sight distance to a 45 mph design speed. The cross-section is limited to 24' of pavement and 2'-11" sidewalks on each side. These geometric characteristics and the continuous truss nature of the structure will preclude the rehabilitation and reuse of the bridge to function as two freeway/turnpike lanes to complement the function and operation of the Little Bay Bridges and Turnpike. In addition, the deck, girders and truss members exhibit major deterioration, and there is extensive substructure deterioration. He noted that the piers are composed of unreinforced granite block and mortar, and in conjunction with the low internal redundancy of the truss design and the fatigue associated with

the age (1935 construction) of the structure, the General Sullivan Bridge is more vulnerable to a seismic event than the Little Bay Bridges. The General Sullivan Bridge is also historic and subject to costly lead paint removal and re-painting. Frank noted that the Kimball Chase 1991 inspection and evaluation of the bridge estimated rehabilitation costs ranging from $8 million to $16 million depending on the nature and extent of pier reconstruction or replacement. These 1991 cost estimates would be $12 - $20 million in 2003 dollars, and may underestimate the cost of painting. For example, the I-95 Piscataqua River Bridge was recently re-painted for approximately $11.8 million. He concluded by reiterating the infeasibility of rehabilitating the General Sullivan Bridge to function as a Turnpike–like facility to complement the Little Bay Bridges.

Frank then introduced Steve Lawe who summarized the process to update the seacoast regional traffic model, the purpose of which is to estimate how future traffic patterns are impacted by land use and transportation policy alternatives, and to enhance the overall understanding of the transportation planning process. He identified data requirements such as seasonal and year round housing; auto ownership and household size; employment; roadway network characteristics such as functional classification, number of lanes, capacity, speeds, and intersection controls; transit routing and costs; tolls and auto costs; travel patterns, such as trip generation, length of trips, mode choice, and choice of travel route; traffic counts; transit ridership; and the 1992 seacoast household survey. Steve touched on the sensitivity of the model with respect to infrastructure improvements and changes in land use, and noted that increases in capacity may attract new vehicle trips and that increases in vehicle cost may decrease vehicle trips. The results or output of the travel demand model include: roadway volumes and delays, transit ridership, shifts in travel patterns and shifts in land use patterns consistent with the testing of transportation system improvement alternatives.

Steve concluded by summarizing the purpose, methodology and results of the 2003 Seacoast Travel Survey. He explained that the survey format was a series of computer-based dynamic questions whereby respondents "state" their preferences given a series of options, and that answers to a question are input to the next question. The survey was designed to estimate Seacoast residents' sensitivity to different transportation mode alternatives, and to assist in developing recommendations on how to improve transportation in the seacoast area. The survey was administered in June 2003 and included 1,537 respondents, approximately 50 percent higher than the 1,000 target response. The survey was computer-internet based with flyers containing the internet web address distributed at many public (toll booths, local transportation centers, city/town halls) areas and at local businesses and colleges. Steve summarized some of the survey findings: 74 percent of respondents were full time seacoast area residents; travel to/from work (60 percent) and work related business (13 percent) were the most prevalent trip purposes; 78 percent of travelers drove alone; 19 percent shared a ride; and of those who chose not to use a car, cost, congestion and preference for transit were cited as reasons for not driving. The Rockingham and Strafford regional planning commission are currently reviewing a draft summary report.

Peter Walker then provided an overview of environmental issues associated with the project. He briefly reviewed the project Study Area, and reminded the audience that the project is in the first phase of the EIS process. Perhaps the most obvious and significant feature of the study area is the Little Bay/Great Bay estuary, one of the largest estuarine environments on the east coast. The study area contains a number of natural resources including tidal and freshwater wetlands, wildlife habitat, rare species habitats and floodplains. VHB is consulting with the University of New Hampshire to conduct an inventory of subtidal (submerged) habitats.

Mr. Walker briefly reviewed the approach being taken to study potential air quality effects, noting that reduction in congestion would typically have a net positive effect on regional air quality. Noise impacts from the highway have been a concern expressed frequently during previous project meetings. He presented a summary of the noise study, showing a figure which depicts 14

noise sensitive areas determined to be present in the study area. A detailed noise model will be created that will help determine where noise mitigation measures might be necessary.

Mr. Walker briefly summarized the recreational and historical resources at Hilton Park on Dover Point. Because the project must comply with Section 106 of the National Historic Preservation Act, the Department must consider impacts to historic structures and archeological resources. The interested public is invited to participate in consultations on this subject among the NHDOT, the FHWA and the NH Division of Historical Resources. If residents own a historic property that may be affected, or if they belong to an organization concerned with historical resources, they may contact Mr. Harry Kinter of the FHWA to learn more about how they can become a consulting party.

Socio-economic effects will also be addressed in the EIS. Socio-economic effects can be direct - for example, property owners may be impacted if an expanded highway requires acquisition of new right-of-way. Effects can also be indirect and cumulative. For example, by changing the operation of the regional transportation network, patterns of residential and business development may change, which could have an effect on regional patterns of population growth. Pete Walker explained that the socio-economic study area would include more than just the Dover and Newington areas for purposes of analyzing these larger trends. A total of 32 communities, including portions of Carroll, Strafford, and Rockingham Counties would be included in the analysis.

Because of the limited time available for the evening's meeting, Mr. Walker could not touch in detail on all of the issues that will be analyzed in the EIS. However, he indicated that several other issues in addition to those already discussed would be considered. The list of issues includes: navigation, floodplains, aesthetic resources, aquifers and public water supplies, and potential hazardous contamination sites.

Frank O'Callaghan then summarized the reasonable range of alternatives, in addition to the No-Build alternative, that will be considered: Transportation System Management (TSM) improvements, Transportation Demand Management (TDM) measures, Upgrading the Corridor, and a combination of the above. He noted that at this point in the study, conceptual improvement alternatives have not been developed; rather, concepts will be developed from this range of alternatives and screened for feasibility in the next phase of the study. He went on to state that the No Build alternative perpetuates the existing transportation system, is the base case for comparing system improvement alternatives, and is required by the federal environmental review process. TSM improvements are generally low cost improvements and usually implemented within the existing right-of-way to increase efficiency or improve safety. Adding turn lanes or increasing traffic control at intersections or changing travel patterns are typical TSM actions. TDM measures, on the other hand, are directed at reducing the overall travel demand on the transportation infrastructure and may include bus, transit, rail, ride-sharing, park and ride, high occupancy vehicle lanes and work hour management alternatives. Frank noted that inventories of existing levels of bus, rail and park and ride services have been undertaken and current system improvement plans noted to assist in developing TDM-related improvement alternatives. For example, the consultant team is aware of the City of Dover's proposal for a new park and ride facility to be located in the Exit 9 area.

With respect to upgrading the corridor, alternatives to widen and rehabilitate the Little Bay Bridges, or to replace the Little Bay Bridges to provide 3 or 4 lanes in each direction would be considered. Alternatives to rehabilitate or replace the General Sullivan Bridge for local traffic, or for transit and HOV use only, or for pedestrians and bicyclists only, would be considered, as well as the alternative of removing the General Sullivan Bridge and providing a pedestrian/bicycle system connection as part of a Little Bay Bridges alternative. Bridge infrastructure alternatives

would be complemented by improvements to the mainline of the Turnpike and the interchanges. Frank concluded that he suspected a smart transportation solution would emerge that reflects a combination of TSM, TDM and Corridor Upgrade improvements, a solution that best balances meeting the purpose and need of the project with minimizing impacts on the environment and to property owners; a solution that is permittable, supported by the local communities and affordable.

Chris Waszczuk concluded the project team's presentation by identifying the five (5) phases of the project: (1) Scoping/Data Collection/Issue Identification; (2) Conceptual Alternative Development and Screening; (3) Preliminary Design and Impact Assessment of Alternatives that survive the Phase 2 screening/Draft EIS; (4) Public Hearing which presents and seeks approval for a Preferred Alternative; and (5) Final EIS which responds to comments. He noted that NHDOT and FHWA were currently reviewing the Phase 1 Draft Scoping Report, and that the Final Scoping Report would be posted on the project website once it was available for distribution.

Chris then reviewed the revised Project Schedule. He noted the effort to expedite the study in light of the priority and need for the project expressed by seacoast residents and local officials at past meetings and at the recent Governor's Advisory Council on Intermodal Transportation meeting held in Portsmouth on October 27th. He stated that the Public Hearing originally targeted for February 2006 had been moved up to target an October 2005 date. He also noted that the FHWA Record of Decision was now targeted for November 2006, which was a critical milestone and would allow funding for the final design and right-of-way acquisitions to commence. If funding is available, construction could begin as soon as 2008.

Chris also noted that the public participation process was open and inclusive. A project advisory task force (ATF) of 15 members has met and will continue to meet quarterly to discuss the project status and guide the project's development. The ATF is made up of representatives from the municipalities of Dover, Newington, Durham and Portsmouth, the Dover and Portsmouth Chambers of Commerce, the Strafford and Rockingham Planning Commissions, COAST, the environmental community, the NHDOT, and FHWA. The ATF meetings are open to the public. Public informational meetings will be held in each phase of the study and will include notification of the abutters within the project limits. Also, meetings with state and federal resource agencies are scheduled to continue on a regular basis. The project website hosts a wealth of information, and is updated periodically. All meeting notes, reports, plans, etc. will be posted on the website once available. Lastly, the public hearing, as previously mentioned, is targeted for October 2005. Chris finished his comments by reminding the attendees that they could contact Bill O'Donnell at FHWA or Bill Hauser and himself at NHDOT for further information or to offer further comment. He also requested that attendees remember to sign the attendance sheet before leaving.

OPEN DISCUSSION

At approximately 8:10, Chris Waszczuk opened the meeting to public discussion.

A member of the public asked whether the Powerpoint information presented during the meeting would be available on the project website. Chris Waszczuk replied that the presentation would be posted.

Randy Caruthers of 312 Dover Point Road asked whether the Department had given any consideration to constructing a tunnel under the Little Bay, rather than expanding the bridges. Chris Waszczuk replied that the Department had not, to date, considered building a tunnel. Chris explained that the existing bridges represent a substantial infrastructure investment. If at all possible, the Department wants to preserve this investment by rehabilitating/reusing portions of

the existing bridges to keep project costs reasonable. Construction of a tunnel would be prohibitively expensive, and thus had not been considered.

Edward Hoginski, of Dover Point Road, asked whether the Department has identified which houses will be taken for the highway project. Chris replied that Department has not yet initiated a detailed study of design alternatives. While the 2000 Feasibility Study identified some conceptual design alternatives, it could not evaluate whether those designs were feasible from an engineering perspective. The Department and its consultants will begin a study of design alternatives this winter and spring.

Gordon Smith commented that he felt the option of a tunnel made sense. He asked whether the Department is planning to also consider a multi-level bridge such as those found in Boston. Chris Waszczuk thanked Mr. Smith for his comment and indicated that the Department would consider the feasibility of a multi-level bridge.

A resident of Spur Road commented that, in his opinion, the noise from the highway is a significant problem. He asked how the Department plans to maintain traffic over the bridge during construction. He also commented that proper enforcement of the traffic laws in the area would encourage people to drive more safely, resulting in fewer accidents and fewer delays. Chris Waszczuk replied that, as part of the Environmental Impact Statement, the Department would evaluate ways to mitigate the noise issue. During design of the project, the maintenance of traffic during construction will be a large consideration and may actually affect the selection of the preferred alternative. Chris also commented that better enforcement may indeed help, but the NH State Police have limited resources to patrol the highways.

Kevin Duffy, a resident of Homestead Lane, asked whether representatives of the local communities are on the Advisory Task Force. Chris Waszczuk replied that members from Dover and Newington, as well as Portsmouth and Durham, are on the ATF. Mr. Duffy asked how construction would be phased. Chris replied that it is too early to know how the project would be constructed in any detail. The phasing would occur in such a way as to minimize construction impacts with the bridge likely being addressed first. It is likely that the project would be built in several contracts over several years to minimize disruptions. Mr. Duffy then followed up by asking who "approves" the project. Chris explained that several resource agencies would need to issue permits. Moreover, the layout of the project must be reviewed and ultimately approved by a "Special Committee" made up of three Executive Councilors. This Committee will be responsible for overseeing the public hearing process.

Roger Rivers, of Spur Road, asked whether the Tolls would be moved or expanded. Chris Waszczuk explained that previous studies had shown that traffic north of the tollbooths would operate at acceptable levels in the future. Tolls are a statewide concern, and have a set of separate complicating issues. Currently, there are no plans to modify the tolls as part of this project. Mr. Rivers also commented that there are no facilities at the toll plaza rest stop adjacent to Spur Road. This causes a problem, and Mr. Rivers requested that the state install toilet facilities at the toll plaza rest stop.

Kevin Duffy asked if the traffic backups would simply move to the tollbooths after the bridges are reconstructed. Chris explained that this question would be studied in detail in the EIS traffic analysis.

Pam Long, Dover Point Road, suggested that the Department consider a raised highway to minimize impacts on residential neighborhoods and Hilton Park. Chris Waszczuk replied that every opportunity to minimize the project footprint would be considered. The cost of such measures would be a factor in determining whether they are eventually implemented.

Carole Stiles, Dover Point Road, asked how the Department decides when to take a property in full versus only taking a portion of the property. Chris explained that this decision depends on a number of factors including the value of the land, whether a building on the property would need to be demolished, and the proportion of the property subject to impacts. Efforts to minimize property impacts include retaining walls and steepened slopes. If the property still has a high degree of impact, then a full acquisition would be considered.

Alice Briggs of Dover Point commented that she travels the highway daily during the worst hours. In her opinion, a significant problem is related to the Nimble Hill Road weave and the number of trucks attempting to access the Sprague Energy facility. She noted that part of the Interim Safety Project scheduled for construction in 2005 includes closing the reverse direction Exit 4. She recommends that the Department close Exit 4 now, rather than wait. Chris explained that the Interim Safety Project has already completed its public review. Early closure of Exit 4, prior to the related improvements to River Road and Nimble Hill Road, was not discussed. A decision to close Exit 4 early would need to go through a public review, which would be unlikely to conclude earlier than the current 2005 schedule for the Interim Safety Project.

Carole Appel, Isaac Lucas Circle in Dover, commented that there are a number of properties currently for sale in the project study area. She asked whether the Department would buy these properties as they come up for sale, which would limit the need to condemn on properties later. Chris Waszczuk replied that the Department is not authorized to acquire property until the federal Record of Decision (the decision of the Federal Highway Administration and its cooperating agencies on the project) is issued. FHWA's decision is not anticipated until 2006 under the current schedule.

Edward Hoginski asked how the Department intends to maintain two lanes of travel in each direction during construction. Chris Waszczuk suggested that the project construction sequence would need to carefully consider constructibility issues and the need to minimize impacts to traffic. Obviously, transportation in the area would not operate without at least two lanes in each direction. One possibility would be to construct a new bridge, then divert traffic to that new structure while the existing bridges are reconstructed. New lanes, either temporary or permanent, could be constructed in the median or outside the existing travel lanes to accommodate traffic.

Representative Art Pelletier (Dover) asked whether any consideration would be given to limiting access points on the highway. Chris Waszczuk replied that consolidation of access points would be a major feature of the design. Chris briefly reviewed the operation of the gas station at Nimble Hill Road under the Interim Safety Project design. There are currently too many access points within the study area, and too many of these have substandard geometry.

Representative Peter Smith (Dover) expressed considerable concern with increasing the size of the highway, explaining the "if you build it, they will come." While Rep. Smith sees problems with the suggestion of a tunnel or double-decker bridge related to prohibitive costs, he encouraged the Department to think creatively in developing a solution. For example, incentives for carpooling should be created. The goal should be to decrease congestion, not increase the number of cars the highway can accommodate. Chris Waszczuk indicated that he agreed with the Representative's comments and that the analysis will fully examine not only infrastructure upgrades, but also all available means of reducing traffic such as TSM and TDM measures. However, Chris noted that studies have shown that it is very difficult to get a significant portion of the public to use mass transit. The Department will ultimately try to develop a multi-modal solution.

Barbara Ridolfi, a resident of Pine View Drive, expressed concern that the Department needs to add signs at the bridge area specifying that drivers are to remain in their lanes. Mrs. Ridolfi criticized the Department for not taking action on her request sooner. Mrs. Ridolfi acknowledged that the Department intends to post the Scoping Report on the internet. But, she noted that all citizens of Dover should be concerned with the project and suggested that the Scoping Report be published on the front page of Foster's Daily Democrat. She also complained that she had not received a single piece of mail on the project, even though she asked to be on the project mailing list. In response, Mr. Waszczuk noted that he would discuss Mrs. Ridolfi's sign suggestion with the Bureau of Traffic, who is responsible for such matters. However, he noted that this is the first time that he has heard the suggestion. He also noted that, in addition to the internet, the Department will publish the Scoping Report in hard copy and will make it available in a number of places such as area municipal buildings and libraries. Finally, Mr. Waszczuk stated that he would ensure Ms. Ridolfi is listed on the project's mailing list.

Sam Bittner commented that the noise is his most substantial concern. He asked whether the locations of noise barriers would be identified on concept plans once completed. Also, Mr. Bittner commented that there should be a public hearing after the Final Environmental Impact Statement is issued. Mr. Waszczuk confirmed that concept plans would show the location of noise barriers. He also explained the public process. A major public hearing involving the regulatory agencies as well as the Special Committee (made up of three Executive Councilors) will follow publication of the Draft EIS which will identify the preferred alternative. A formal public comment period will follow this hearing. After this, the Department and the FHWA will consider and respond to all public comments in writing and by preparing the final Environmental Impact Statement. A subsequent public hearing following the final EIS is not anticipated.

Senator Iris Estabrook noted that she was in attendance mainly to listen to the Department's presentation and to hear public concerns. However, she inquired whether the planned Park & Ride project at Exit 9 might be constructed prior to the rest of the project and whether funding would be available. Chris Waszczuk replied that Park & Ride facilities qualify for CMAQ (i.e., federal Congestion Mitigation and Air Quality Program, administered by NHDOT) funding, which is available at about $6 million annually. A park and ride facility could be constructed at Exit 9 with these funds sooner than the rest of the project.

A member of the public asked whether the Department could create a carpool lane now, rather than wait for the larger project. Chris Waszczuk replied that the Department would need to determine whether such a carpool (HOV) lane would be appropriately utilized and what type of traffic implications would result. In the long term, an HOV lane may be feasible. However, it may not be realistic in the short term to create a dedicated lane in the face of the severe current congestion.

Cynthia Copeland, representing the Strafford Regional Planning Commission, commented that there is the need to look at the bigger picture, including how residents of the area live and commute. By changing these patterns, the demand on the highway might be alleviated. The study must focus on all possible TDM strategies. Chris responded that realistic expectations of all feasible TDM strategies would be considered.

Edward Hoginski asked whether the study would ultimately make a recommendation about the fate of the General Sullivan Bridge. Mr. Waszczuk replied that the study would address the issue of the bridge, which would include rehabilitation and re-use or removal of the bridge.

A resident, noting that she had participated in the stated preference survey, asked whether transit options would be one way to reduce congestion. She stated that park and ride facilities may help the situation. Steve Lawe replied that about 5% of the respondents indicated that they would be

willing to change to a mass transit option if conditions for its use were optimal. The woman stated that the growth at the Pease International Tradeport had contributed to the highway congestion and suggested that employees of the Tradeport might be willing to use mass transit. Steve Lawe indicated that all feasible options for providing mass transit would be analyzed during the study. However, he noted that past studies had found that it is very difficult to encourage a significant number of commuters to change to transit options due to inherent issues of convenience.

Bill O'Donnell noted that the EIS would make recommendations on the final disposition of the General Sullivan Bridge. He noted that the State Historic Preservation Office would like to see the Bridge preserved. However, the US Coast Guard had indicated that the bridge is an impediment to safe navigation and therefore has suggested that the bridge be eliminated.

A general discussion of the General Sullivan Bridge followed. Since the bridge is eligible for the National Register of Historic Places, it can only be impacted if there is no other feasible alternative. The EIS will therefore study the costs and engineering issues associated with its reuse. The bridge is considered the second most historic bridge in NH. Sam Bittner noted that the bridge is a recreational resource. Some people use the bridge to walk or to fish. Mr. Bittner argued that the bridge should be preserved for these purposes, even if it cannot be used for transportation. Tom Keegan commented that a new bridge could be built that would accommodate pedestrian and recreational use.

Spencer Strubel, of Dover Point Road, stated that the Department should consider regional transportation patterns during the study. He stated that the Department should consider new highway/bridge connections in an entirely different alignment such as to the west to avoid impacting Dover Point. Chris Waszczuk noted that the Great Bay is too wide to span. Generally, new alignments on new locations do not minimize impacts. The focus of the study will be on the current corridor, which is a major north-south route.

Julie Porter asked about incident management. She asked whether it is possible to create an "early warning system" such that drivers in the region would be informed about accidents or congestion in an effort to redirect their route choice. Chris Waszczuk replied that such a program is currently near implementation. Variable message boards should be in place by the spring/summer of 2004. A discussion followed in which several residents encouraged the Department to expedite the creation of this system.

Bruce Woodruff, Dover City Planner, referring to an earlier statement by Steve Lawe, stated that 5% of 80,000 to 100,000 trips is indeed a large number. He stressed that transit options must be part of the solution. Such measures should include implementing an express bus service in the region, creation of exclusive HOV lanes, and creation of park and ride facilities.

Ilean Bittner spoke in favor of preserving the General Sullivan Bridge. She stated that many people, not just local residents, use the bridge for recreation. She has met people from Rochester, Portsmouth and Rye while walking the bridge.

Rep. Art Pelletier inquired about the aesthetics of future noise barriers. Chris Waszczuk stated that decisions on the type of noise barrier construction likely would not be decided until the final design stage following the EIS.

Chris Cross, Chair of the Advisory Task Force, stated that the project is the highest priority transportation project for the Seacoast Metropolitan Planning Organization. Accordingly, the Department has prioritized the project. Mr. Cross commended the Department for compiling the present background data, and thanked citizens in attendance for their good ideas. Mr. Cross

stated that he believes the process for studying the transportation issues is excellent, but requested that citizens be patient. While the study will ultimately lead to solutions for the short term, intermediate terms and long term, the process is designed to provide adequate assessment of a large number of issues.

At approximately 9:30 p.m. the meeting adjourned.

Noted by: M. Dugas, C. Waszczuk

cc: J. Brillhart
C. Waszczuk
M. Dugas
M. Laurin
H. Goodwin (Bureau of Turnpikes)
W. O'Donnell, FHWA
Town of Newington Selectboard
Paul Beecher, Dover City Manager
Newington-Dover ATF

MEETING SIGN-UP SHEET

PROJECT Newington - Dover: Spaulding Turnpike improvements - Public Informational Meeting

LOCATION Dover City Hall

PROJECT NO. NHS-027-1(37) (Federal) 11238 (State)

Name	Agency or Address	Comments
ROGER R RIVERS	193 Spur Rd Dover	I LIVE NEXT TO IT!!
JESSE N. BOX	400 DOVER PT. RD	
KATHLYN G. BOX	400 DOVER PT. RD	
Tom Fargo	SRPC	
TIM ROACHE	SRPC	
RICHARD PEASE	NHDES	
MARTIN PERENICK	416 DOVER PT. RD	
COMMUNICATIONS CLERK	420 DOVER PT RD	
Jon Perenick	416 Dover Point Road	
SKIP Silver	14 Pearson Dr Dover	
Roy Josselyn		
FRANK & MARGARET MALONE	321 DOVER PT. RD. - DOVER	
Ed & Priscilla Jamaka	16 Boston Hb.	
CLIFF ABBOTT	NEWINGTON NH.	
Ed St. Pierre	22 Leighton Rd Dover	
ART Pelletier	NH HOUSE OF REP	
Larissa Mulkern	Seacoast Newspapers	
THOMAS KEEGAN	19 BOSTON HARBOR RD.	
Sen. Iris Estabrook	Dist 21	
CHERYL MACKEY	343 Dover Pt Rd Dover	SOUND BARRIER AT THE BEGINNING OF PROJECT - NOT AT THE END where the money RUNS OUT!
Debbie Burd	343 Dover Pt Rd Dover	
Jan MacMillan	14 Boston Harbor Rd	Very noisy now & had land taken away in last bridge construction. Concern of losing home.
Gordon Smith	14 Boston Harbor Rd.	
Edward Hoginski	230 DOVER PT RD	
JoAnn Fmc	CLD Consulting Eng	
Dave White	City of Dover	Sewer built the better
James & Diana Yeames	409 Dover Pt. Road	CONCERNS ABOUT EVER INCREASING NOISE
Ray Bardwell	199 Blue Rd.	NOISE - CONGESTION CONST. ASAP
RICHARD D ISOM	6 HILTON RD	NOISE BARRIER.
JOANNE B ISOM	6 HILTON RD	
Robert & Alice Bragg	16 Cate Dr	eliminate reverse direction ramps
Evelyn & Allen Schintzius	23 Harlan's Way - Dover	-
Chris CROSS	Rockingham Plng Commission / Newington Rep	
Jack Newick	Newick's Restaurant - Dover	

Date November 12, 2003

MEETING SIGN-UP SHEET

PROJECT Newington - Dover: Spaulding Turnpike improvements - Public Informational Meeting

LOCATION Dover City Hall

PROJECT NO. NHS-027-1(37) (Federal) 11238 (State)

Name	Agency or Address	Comments
Harold Cator	403 Dover Pt Rd Dover NH	
Lloyd Melanson	413 DOVER PT RD	I WOULD like To See Sound BARRIERS
LINDA N. STRUBLE	316C DOVER PT RD	
BARBARA	22 WENTWORTH TER	—
Rogers	22 Wentworth Ter	
Dave Daniels	27 Wentworth Ter	
GARY LINDSAY	197 SPUR RD.	SOUND BARRIERS ARE DEFINITELY NEEDED
Normand Cote	241 Toleno Rd. Dover.	
Peter Schmidt	PO Box 1468 Dover	State rep.; Keep me better informed
Barbara Rudolf	5 Pinecrest Dr Dover	speed controlled & sound barrier
REP. RAMOND HOFEMANN	18 WELLINGTON AVE, DOVER	DOUBLE DECKER IS BEST IDEA.
JULIE PORTER	300 Tolend Rd. Dover	
Caroline French	23 Bostal Harbor	
Pam & Paul Long	418 Dover Pt Rd	
Gordon Miller	23 Bostal Harbor Pt, Dover	
Tom & Ronnie Bottino	346 Dover Pt. Rd. Dover	Sound Barriers positively required!
Eleanor Bottino	354 Dover Pt. Rd, Dover	
Carol Stiles	422 Dover Pt Rd	Either Sound Barrier or take my House
Andy Shive	419 Dover Pt Rd	Raised Highway - Double layer bridge
Ron Reilly	24 Beech Rd Dover	
George McCannaghen	116 Middle St. Portsmouth	
Betty & Brian Gedney	393 Dover Pt. Rd.	
D. M. Rist	35 Cate Drive Dover	
Terie Norelli	35 Middle Rd Ports	State Rep - Ports/Newn.
Bob & PAM MACHLIS	334 Dover Pt. Road	
ROB RICARD	54 Silvertail Rd Berwick, ME	
Steve Stavropoulos	21 River Rd Newington	
Michael Sheffield	350 Dover Point Rd Dover	
KEVIN DUFFY	4 HOMESTEAD LANE, DOVER	
Cynthia Copeland	SRPC	
Carole A. Appel	16 Isaac Lucas Circle, Dover	
Robert M. Rowe	407 Dover Point Rd, Dover	
Nora Kelley	348 Dover Point Rd Dover	I would like to see WIDE publication of these meetings
Barbara Winter Fournier	62 Clements Dr. Dover	
Rick & Darene Stern	1223 Spaulding Tpk Newington	
PETER FORSYTHE	5 FORSYTHIA DR DOVER	
Cecile Poliquin	6 Homestead Lane Dover	

Date November 12, 2003

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Waszczuk, NHDOT
Marc Laurin, NHDOT
Steve Wells, COAST
Bruce Woodruff, City of Dover
Tom Fargo, SRPC, Dover
John Burke, City of Portsmouth
Mike Burlage, NHDOT
Peter Walker, VHB
Frank O'Callaghan, VHB
Members of the public (see attached list)

Date/Time: June 30, 2004

Project No.: 51425

Place: Dover City Hall

Re: Newington-Dover, 11238
Public Information Meeting

Notes taken by: Frank O'Callaghan

Chris Waszczuk, Project Manager for the New Hampshire Department of Transportation (NHDOT) called the meeting to order at 7:10 PM by introducing himself and welcoming those in attendance. He stated that the evening's meeting was the first of two Public Information Meetings – the second being scheduled for the following evening, July 1, 2004, to be held in Newington. He briefly described the overall study process noting that the project team has considered many ideas, developed a number of preliminary improvement alternatives and is looking for public input from this evening's meeting. He noted that information packets were available to assist attendees in following and understanding the presentation, and that a project newsletter was also available which summarized many aspects of the study to date. Chris reminded attendees to sign in, and indicate if they were interested in being added to the project's mailing list.

Chris then introduced Mike Dugas, NHDOT, Marc Laurin, NHDOT, and Frank O'Callaghan, VHB, as members of the project team. He noted that Jamie Sikora, FHWA, was in attendance representing FHWA. He reviewed the composition of the Advisory Task Force (ATF), noting community representation and its purpose of providing guidance to the project team and acting as a conduit for disseminating project information to project stakeholders. Chris noted that the ATF meets regularly, usually every 2 to 3 months, and has met to date seven times over the course of the study.

Chris then reviewed the meeting agenda, noting that it would be interactive in nature, and that four (4) question and answer periods are scheduled during the presentation to make the digestion of information and dialogue with the public as convenient and effective as possible. He then reviewed the project's purpose which is to reduce safety problems and improve transportation efficiency for an approximately 3.5 mile long section of the Spaulding Turnpike beginning at the Gosling Road Interchange in Newington and extending across the Little Bay Bridges to the toll plaza in Dover.

Chris then reviewed the project need citing the importance of the Spaulding Turnpike from commuter, commerce, and tourist perspectives; its designation as part of the National Highway System (NHS); and its function as a limited access highway linking the seacoast region with I-95, Concord, the Lakes Region and the White Mountains. He cited the historic growth of traffic and future projections, the poor levels of traffic service, existing geometric constraints and deficiencies and the history of traffic accident experience. Chris also noted that the Turnpike bisects local residential, recreational and commercial areas, and that there exists a need for local connectivity of motorists, pedestrians and bicyclists between the east and west sides of the Turnpike in both Newington and Dover. He stated that the Little Bay Bridges are major structures located on an important highway in a moderate seismic area and were not designed to meet the current seismic criteria for this region. He noted that the Newington-Dover Spaulding Turnpike project was included in the State's Ten-Year Transportation Improvement Program and was the highest long-term transportation priority of the Seacoast Metropolitan Planning Organization. He stated that as the area continues to develop and future traffic volumes increase, traffic operations and safety conditions would worsen.

Chris then reviewed the five (5) phases of an Environmental Impact Statement (EIS) noting that the EIS is the highest order of study required by the National Environmental Policy Act (NEPA). The project Scoping Report, published in March 2004, summarizes the Phase 1 activities, which included the project's purpose and need statement, inventories of environmental resources, analysis of existing traffic conditions and projections of future travel demands, and the identification of the range of typical alternatives that would be considered. Currently, Phase 2 activities include the development and screening of potential alternatives to carry forward into Phase 3, the Draft EIS, for detailed analysis. Phase 4 is the FHWA/ACOE/NHDES/NHDOT joint Public Hearing on the Preferred Alternative, and Phase 5, the Final EIS, will respond to comments on the DEIS as well as identify the least environmentally damaging practicable alternative (LEDPA). He then reviewed the overall project schedule target dates including September 2004 for completion of Phase 2, and the fall of 2005 for the joint-public hearing. Assuming the availability of funding, construction – which would be phased – could begin as early as 2008. Prior to pausing for any questions on project purpose and need, or the phasing and schedule of the project, Chris noted the importance of public participation in the study, and emphasized the openness of the process. He identified the ATF as a 2-way conduit for stakeholder input and feedback. The ATF meets regularly and Chris noted that the next scheduled ATF meeting will be on August 25, 2004 at Newington Town Hall. He reminded all that there are public information meetings scheduled for each phase of the study, and that meetings with federal and state Resource Agencies are also regularly held to solicit their input. Project newsletters are also prepared at the conclusion of each phase of study, and the project website, www.newington-dover.com, provides a wealth of project related information and another means of public input to the project team.

At this point, Chris paused and asked for questions.

State Senator Iris Estabrook inquired as to the status of the Incident Management Program, i.e., message boards and signage. Chris Waszczuk responded that the project is currently under construction.

Ray Bardwell, a Spur Road resident, expressed concern over noise from truck braking and motorcycles associated with Motorcycle Week. Chris responded that noise impacts would be evaluated and addressed in the next phase (DEIS) of the study.

Nora Kelley, a Dover Point Road resident, suggested that public turnout at Informational Meetings could be maximized if notice of the meetings were carried on the local community (Channel 22) television channel. Chris responded that meeting notices were sent to Turnpike abutters, local newspapers, resources agencies, parties on the project's mailing list, local and regional Officials, and carried on the project website. Bruce Woodruff, City of Dover, added that in the future, he would take responsibility for notifying Channel 22.

At this point, there being no further questions, Chris Waszczuk turned the presentation over the Frank O'Callaghan to review the project background. Frank began by describing the project study area as extending north from Exit 1 (Gosling Road/Pease Boulevard) of the Turnpike on the south, traversing the Little Bay Bridges to a point just south of the Dover Toll Plaza, and bounded by the Piscataqua River on the east and Little Bay on the west. He noted many study area issues such as marine habitat, navigation, water quality, tidal and surface wetlands, floodplains, ground water, hazardous materials, visual resources, park and recreational activities, historic and cultural resources and potential residential and commercial property impacts. He stated that air quality and noise were also relevant issues, and each would be analyzed in detail during Phase 3 (DEIS) of the study. He also noted that indirect and cumulative socio-economic impacts would also be identified in the next phase (DEIS) of the study. He stated that the March 2004 Scoping Report summarized many of the inventories of environmental resources.

In summarizing safety conditions, Frank noted that study area traffic accidents during the 1997-2001 period (908 total) increased by approximately 58 percent in comparison to the previous 5-year, 1992-1996, period (575 total). During the 1997-2001period, accidents increased at approximately 11 percent per year in comparison to the average annual traffic volume growth of 3 percent per year. He also reviewed traffic volume growth where average daily traffic (ADT) volume has increased from approximately 30,000 vehicles in 1980, to over 70,000 in 2003, and is projected to grow to over 101,000 vehicles per day by the year 2025. He noted that current weekday peak hour capacity constraints extended from Exit 6 southbound to Exit 3 (Woodbury Avenue) in the morning, and from Exit 4N northbound through Exit 6 in the evening. These capacity conditions are compounded by a number of geometric deficiencies including substandard shoulder width on the Little Bay Bridges, substandard turning radii at many of the interchange on and off ramps, and inadequate weaving distances in both the northbound (River Road) and southbound (Nimble Hill Road) Exit 4N - Exit 4 area. As traffic volumes grow, the safety and traffic operational conditions, which are currently constrained, will worsen.

Frank O'Callaghan then presented some general bridge information for both the Little Bay Bridges and the General Sullivan Bridge. He noted the length, width, main navigation span and vertical clearance of each bridge. The Little Bay Bridges are characterized by substandard shoulder widths and a 3.5 percent grade which limits driver sight distance to a 60 mph design speed (design speed being the maximum safe operating speed governed by the vertical alignment or profile). The 2-lane bridges have minor deterioration and the substructure for both bridges – composed of reinforced concrete – was designed and constructed in 1966 prior to seismic resistance requirements. Frank then enumerated several factors which would affect the rehabilitation alternatives for the General Sullivan Bridge. A 4 percent grade limits driver sight distance to a 45 mph design speed. The cross-section is limited to 24' of pavement and 2'-11" sidewalks on each side. These geometric characteristics and the continuous truss nature of the structure will preclude the rehabilitation and reuse of the bridge to function as two freeway/turnpike lanes to complement the function and operation of the Little Bay Bridges and Turnpike. In addition, the deck, girders and truss members exhibit major deterioration, and there is extensive substructure deterioration. He noted that the piers are composed of unreinforced granite block and mortar, and in conjunction with the low internal redundancy of the truss design and the fatigue associated with the age (1935 construction) of the structure, the General Sullivan

Bridge is more vulnerable to a seismic event than the Little Bay Bridges. The General Sullivan Bridge is also historic -- being the second highest-ranking historic bridge in the state -- and subject to costly lead paint removal and re-painting.

At this point, Frank paused and solicited questions from the public. There being none, he began presenting the range of conceptual alternatives that have been developed including Transportation System Management (TSM), Transportation Demand Management (TDM), Bridge Alternatives and Roadway Alternatives. With respect to TSM improvements, Frank noted that these improvements are generally low cost in nature and usually implemented within the existing right-of-way, or requiring minor right-of-way, to improve safety and/or increase traffic operating efficiency. Examples of TSM-type actions are adding turning lanes and/or increasing traffic control at intersections, or changing pavement markings or increasing regulatory or directional signage.

Within the study area, Frank noted that signage on the bridge approaches that reminds drivers to stay in their lane has already been upgraded, and directional signage for NB travelers connecting to US4 at Exit 6W will be upgraded as part of a construction project this year. He then referred to conceptual graphics and described several TSM alternatives.

Dover TSM 1

This action involves extension of the NB deceleration lane to the loop ramp leading to US 4 at Exit 6W. Restriping of the shoulder area under the overpass will extend the deceleration lane by approximately 400' without impacting the bridge abutment. This measure will prevent peak hour exiting traffic from backing up on the loop ramp onto the Turnpike and blocking NB through traffic on the Turnpike.

Dover TSM 2

This action involves merging the 2-lane SB on-ramp at Exit 6 to a single lane prior to the merge with the main line, coupled with carrying two (2) through lanes on the Turnpike through the Exit 6 interchange to merge with the single SB on-ramp. Currently, the 2 Turnpike through lanes merge to a single lane. The proposed changes will make it safer and easier for drivers to be in the proper lanes (either inside or outside) when planning to exit at Nimble Hill Road or Woodbury Avenue.

Interim Safety Plan (Newington)

The Interim Safety Plan will address the current safety and traffic operational problems at Nimble Hill Road and at River Road due to inadequate weaving distances between these roadways and the median SB to NB turnaround on the Turnpike. By providing a two-way, grade-separated connection under the Turnpike, between Nimble Hill Road and River Road, the median turnaround can be eliminated, thus making the current weaving conditions unnecessary. The existing SB on-ramp from the grade-separated turnaround from River Road will also be eliminated which will remove another safety and traffic operational problem. This project is under final design and scheduled for construction in 2005.

Other Newington TSM Actions

Upon completion of the Interim Safety Plan, the SB deceleration lane to Woodbury Avenue can be extended to provide improved operations. In addition, a NB auxiliary lane can be developed between Woodbury Avenue and River Road to provide a better merging and weaving condition for traffic entering the Turnpike from Woodbury Avenue and for traffic exiting at River Road. In addition, access from Woodbury Avenue to Shattuck Way/River Road via the River Road/Patterson Lane connection would be restricted to emergency vehicles only to preclude NB traffic from diverting

to River Road in an attempt to bypass Turnpike traffic and rejoin the Turnpike at Exit 4. The NB auxiliary lane will be included as part of the Interim Safety Project

While reducing the level of traffic turbulence and improving the safety of current traffic operations on both sides of the bridges, Frank reminded all that the basic capacity constraints of the bridges and Turnpike remain, resulting in peak hour congestion and vehicular delay.

Frank then reviewed the Transportation Demand Management (TDM) strategies that have been considered to reduce the overall travel demand within the corridor including rail, bus, park and ride facilities, high occupancy vehicle (HOV) lanes and employer-based measures. He noted that the project team had met with transit operators and regional planning staff in developing these alternatives. With respect to rail, he presented several alternatives.

Expansion of the Downeaster Service

The first rail alternative examined would involve expanding the Downeaster service by one train set. Currently, the Downeaster makes four round trips per day through the study area. However, only one of these trips coincides with the morning peak hour commuter time. Thus, the existing service is really not providing commuter service. By adding an additional train, it is expected that the service would be more convenient to commuters in the study area. The additional train set would run from Dover station to Boston during the weekday AM peak hour, and return from Boston during the PM peak hour. This alternative would require construction of a new layover facility in Dover in addition to the purchase of a new train set.

Based on a conceptual design, the infrastructure investment for this option is expected to cost between $11.5 and $17 million. It was assumed that there would not be a need to double track the existing rail corridor to the Massachusetts state line. If that double tracking is in fact required, then the capital investment would increase to about $110-$115 million. Frank noted that these estimates (for all rail and transit alternatives) did not include operational costs.

Regional Commuter Rail Service

A second rail alternative would involve development of a new commuter rail line to carry passengers between Rochester and Portsmouth. This alternative would utilize the existing Conway Branch line south from Rochester and then run along the Main Line West to Dover. From Dover there are two (2) options: continuing along the MLW to Rockingham Junction, and then running east to Portsmouth along the Portsmouth Branch line; or running south from Dover on new right-of-way paralleling the Turnpike and crossing the channel to meet the Newington Branch Line.

Capital cost estimates for these options range from approximately $145 to $170 million. This would involve upgrading the existing rail lines, purchasing new train sets and building new train stations in Rochester, Somersworth, Newmarket and Portsmouth. The cost estimate does not include operational costs. Preliminary ridership estimates would result in fewer than 100 peak hour vehicles being removed from the Turnpike for the Rockingham Junction option, and fewer than 150 vehicles being removed for the more direct route paralleling the Turnpike.

Commuter/Tourist Service to Conway

A third rail option would involve extension/upgrading of rail service from Dover along the Conway Branch to Rochester and then north to Conway. This option assumes that the NHDOT would restore the 22 miles of missing track in Ossipee, and could be developed to handle freight service and also

serve as a connection for tourists visiting the North Country or Boston. A preliminary cost estimate is approximately $40 million.

Frank explained that ridership numbers are very preliminary and that these rail options appear to remove approximately 50 to 150 peak hour vehicle trips from the Turnpike, a relatively low number in relation to the total traffic volume along the Turnpike.

Pease Spur

A now inactive rail right-of-way exists in Newington which runs from the industrial area on the south and east portion of the study area (the Newington Branch Line), across the Turnpike and then into the Pease Tradeport. The rail right-of-way is at-grade and was active when Pease was used as a military base. Frank pointed out that all of the Newington conceptual roadway alternatives maintain a grade-separated right-of-way corridor for future restoration of this rail service.

Frank then described the three (3) bus alternatives that had been developed and preliminarily assessed:

Expand Intercity Service (Rochester-Boston)

C & J Trailways currently operates a coach service between Dover and Boston via Portsmouth. This service could be expanded by adding coaches and extending the service area to Rochester. The cost of this alternative would be approximately $11.5 million in capital investment.

COAST Express Service

Frank explained that COAST plans to operate new express service between Rochester and Portsmouth along the Turnpike. This service is being funded through a CMAQ grant and is scheduled to begin in 2006. He noted that the express service could be further enhanced by adding Park and Ride facilities at Exit 9 in Dover and at Exit 12 in Rochester. The cost estimate for these Park and Rides is approximately $5 million. The Park and Rides would allow commuters a place to transfer between their private vehicles and the bus service, as well as support ride sharing and van-pooling.

Enhance Local Bus Service

Wildcat Transit and COAST, specifically COAST Route #2 (Rochester-Portsmouth), Wildcat Route #4 (Dover-Portsmouth) and COAST'S Tradeport Trolley operate local bus routes in the study area. These services could be enhanced by adding additional buses to reduce headways and by providing an interconnection/transfer point at Exit 1 which would allow riders to transfer among the local bus operators. In addition, a new Park and Ride facility could be constructed at the intersection of Route 108 and US4 in Durham, which would support the Wildcat #4 route, encourage ride sharing and van-pooling and allow the capture of some traffic that would otherwise go to or from the UNH campus. Capital cost for this enhancement is expected to be about $6.5 million.

There is some overlap among these bus alternatives. Therefore, if the three (3) alternatives were bundled and implemented together, the capital cost of the entire package would be about $16 million. Preliminary analysis indicates that ridership for these bus alternatives would be equal to the rail alternatives - at a fraction of the cost. Frank noted that analysis of ridership continues. He concluded by stating that new park and ride facilities were proposed at Exit 9 in Dover, at Exit 12 in Rochester and at the US4/NH108 interchange in Durham. Such a site would also benefit Durham and UNH by allowing UNH visitors to park remotely and be shuttled to the campus.

With respect to High Occupancy Vehicle (HOV) and Reversible Lane alternatives, Frank described two (2) main options that were examined, in comparison to a standard 8-lane (4 NB and 4 SB) roadway cross-section, to potentially reduce the scale of future roadway and bridge infrastructure improvements. He reminded all that future travel demands require 4-lanes in each direction assuming current travel characteristics (i.e. mode split, vehicle occupancy rates, work hours, travel patterns, etc.).

Frank used a graphic to illustrate the cross-section of each of the options. The first option would be a 2+2+2 lane cross section, with the center two lanes intended as HOV or reversible lanes. The total cross-section of this alternative would be approximately 132 feet. However, the results of the traffic modeling completed to date indicate that a minimum of three lanes in the off-peak direction during summer and fall peak hours would be needed to meet future travel demands. Therefore, this option was not being pursued.

A second HOV concept would involve a 3+1+3 lane cross-section. The center lane would be an HOV or a reversible lane. Frank explained that in order for HOV lanes to be effective, they must be used by approximately 800 vehicles or more per peak hour. However, the traffic model predicts approximately 300 vehicles per hour would use the HOV lane assuming it would start at the Dover Toll Plaza and extend to I-95 in Portsmouth. Since potential traffic volumes would not justify this alternative, a second option was explored running from just south of Exit 6 to just north of Exit 1. This alternative would potentially maximize HOV ridership by extending HOV access to traffic from US4, Dover Point Road, and the Pease Tradeport. Unfortunately, given the compactness of the study area, the relatively short distance between Exits 6 and 1, and the distance necessary to safely accommodate the merging and weaving of traffic to enter and exit the HOV lane, this alternative was infeasible from a traffic safety and operations perspective. A third alternative was considered which assumed an HOV lane running from the Dover Toll Plaza to Exit 1. Similar to Alternative 1, the potential ridership estimate falls approximately 40% below the necessary threshold to justify its use.

In light of the infeasibility of HOV use, the 3+1+3 lane concept was tested from a reversible lane use perspective. Under this concept, the reversible lane would be utilized by the peak flow in the peak hour (i.e., southbound in the AM and northbound in the PM) and open to all vehicles. If this reversible lane extended from the Toll Plaza to Exit 1, approximately 1,500 vehicles per peak hour would use the lane, which is enough ridership to justify its use. Frank explained that this 3+1+3 cross-section would be approximately 152 feet in pavement width due to the shoulders and barriers that would need to be constructed between the reversible lane and the adjacent northbound and southbound lanes. He noted that this cross-section would actually be wider than the approximately 146-foot cross-section required for a typical 8-lane (4 NB and 4 SB) cross-section. As such, VHB concluded that the 3+1+3 reversible lane concept failed to offer a significant advantage over the traditional 8-lane cross-section -- the 3+1+3 cross-section was wider than the typical 8-lane section and presented additional operational and maintenance costs. Frank added, however, that the 8-lane cross-section affords the flexibility to convert the inside shoulder/lanes to HOV or exclusive transit use in the future.

Frank then reviewed employer-based TDM strategies which could include transit subsidies, ride sharing, vanpools, alternative work schedules, bike and pedestrian facilities, on-site amenities (daycare, cafeteria, showers, bicycle storage areas) and a guaranteed ride home program.

Frank next reviewed bridge alternatives. Conceptually speaking, he noted that widening the existing Little Bay Bridges from 4 to 8 lanes had been considered to the west side of the existing bridges, to the

east side of the existing bridges and to both sides of the existing bridges assuming that the General Sullivan Bridge (GSB) was rehabilitated for a future use. Replacing the Little Bay Bridges (LBB) with a new bridge that includes a multi-use path (assuming the removal of the GSB) was also considered. Such a new bridge could be of a signature type structure, e.g. a cable-stayed or concrete arch. He noted that widening or replacing the LBB to the west of the existing bridges would minimize potential impacts to Hilton Park and the shoreline near Bloody Point. Frank also stated that double decking of the existing bridges was also considered in hopes of minimizing the footprint of the bridges and reducing private property and environmental resource impacts on the bridge approaches. Preliminary analysis indicated that these impacts were not significantly reduced in comparison to the previously described west side bridge widening or bridge replacement alternatives, and the double-decker alternative had the additional impacts of higher cost, difficult traffic control during construction and adverse visual aesthetics.

With respect to the General Sullivan Bridge, Frank described several reuse alternatives including a multi-use path for pedestrians and bicyclists; a pedestrian, bicyclist and restricted (6 ton) vehicle or unrestricted vehicle open to local traffic; and a pedestrian, bicyclist and transit vehicle only use. Rehabilitation costs would range from $19 M to $22 M. To replace the GSB would cost approximately $36 M, and to remove it, approximately $5 M. If rehabilitated, periodic (every 25 years) repainting and structural repairs would cost approximately $4.3 M (in 2004 dollars), and deck replacement (every 35 years) would cost approximately $1.4 M (in 2004 dollars). Frank concluded his description of bridge alternatives by reviewing a cost summary matrix of LBB and GSB combined alternatives. The LBB alternatives, which included rehabilitation of the GSB, ranged in cost from $68 M to $90 M. The LBB alternatives which entailed removal of the GSB ranged in construction cost from $57 M to $100 M.

Frank then proceeded to summarize the conceptual roadway alternatives, beginning in Dover. He reviewed three (3) Dover roadway alternatives noting that two-way flow on the Turnpike overpass and the provision of a new NB on-ramp at exit 6 were common to all alternatives. He noted that Alternative 1 provided a two-lane loop ramp for the NB Turnpike connection to WB US4, and that the at-grade connection from Hilton Park and the Wentworth Terrace neighborhood to Dover Point Road resulted in a relatively high number of property impacts in comparison to Alternatives 2 and 3. Frank stated that the E-W connection of Hilton Park for local motorized and non-motorized traffic is an important element from the City of Dover's perspective. Also, the City would consider accepting less efficient traffic operation at Exit 6 if property impacts could be reduced. Frank then described Alternative 2, which provides a grade-separated E-W connection of Hilton Park, and provides the NB Turnpike connection to WB US4 via a diamond-type signal controlled intersection. In comparison to Alternative 1, property impacts are substantially reduced and traffic operation at the four (4) signalized intersections are satisfactory. Alternative 3 modifies Alternative 2 by providing a grade-separated connection between Spur Road and Boston Harbor Road. This connection – under the US 4 overpass and the SB on-ramp to the Turnpike – enables local traffic to connect with Boston Harbor Road and Hilton Park without traversing the interchange area, and allows elimination of the Spur Road traffic signal by restricting turning movements to right-turns only.

Frank then reviewed the Newington roadway alternatives reminding all that Newington representatives had initially indicated community support for Alternatives 6 and 7 contained in the 2000 Spaulding Turnpike Feasibility Study. Alternative 6 maintains interchanges at both Exits 3 and 4, provides a right-of-way for a future railroad connection (paralleling Patterson Lane) to the Tradeport at Exit 3, and would provide an ideal at-grade location for a crossover between the NB and SB barrels of the Turnpike for incident management. He noted that Alternative 6 lacked a connection between the Turnpike and the industrial area located between Shattuck Way and the riverfront, and that local traffic from Nimble Hill Road to Woodbury Avenue is required to use the Turnpike (assuming that drivers decline to use the circuitous back route of River Road and Shattuck Way).

Frank noted that the SB off-ramp to Woodbury Avenue at Exit 3 had been relocated slightly to the north (revising the original concept) to avoid impacting access to the City of Portsmouth's water tower. Alternative 7 combines Exits 3 and 4 at a new single point diamond interchange. This alternative provides roadway connections to both the Tradeport and the River Road-Shattuck Way industrial area, free-flow connections between the Turnpike and Woodbury Avenue, right-of-way for a future rail connection to the Tradeport that parallels Patterson Lane, and a local connector between Nimble Hill Road and Woodbury Avenue. Local access to future development at the former drive-in site could also be provided. Projected traffic volumes require a double NB on-ramp, which is problematic given the limited distance to merge prior to the bridge. The elevated structure of the Turnpike will present a visual impact, and the cost of the interchange (based on the 2000 Feasibility Study) will be approximately 50 percent higher than Alternative 6 Revised.

Alternative 9 combines the current Exits 3 and 4 at the location of the existing Exit 3 via a SB two-lane loop off ramp and a NB diamond type interchange. The local roadway connection to the Tradeport and the River Road – Shattuck Way industrial area is provided adjacent to the existing railroad right-of-way, which is preserved for a future connection to the Tradeport. A local roadway connects Nimble Hill Road to Exit 3 and Woodbury Avenue. The distance between the two-lane NB on-ramp at Exit 3 and the Little Bay Bridges is adequate for traffic merging prior to the bridge. Access to the former drive-in site could be provided from the local connector. Frank noted that the ATF reviewed Alternatives 6, 7, and 9 at the March 31 workshop meeting, and advised VHB to drop Alternative 7, and to focus on combining the best elements of Alternatives 6 and 9 into a new concept. To that end, he then described Alternatives 10 and 11.

Alternative 10 is similar to Alternative 9 in that it combines the current Exits 3 and 4 at the location of the existing Exit 3 for SB traffic, and maintains the local roadway connection to the Tradeport and the River Road – Shattuck Way industrial area adjacent to the existing railroad right-of-way, which is preserved for a future connection to the Tradeport. The local roadway connection from Nimble Hill Road to Exit 3 and Woodbury Avenue is also maintained. However, the SB off-ramp at Exit 3 has been converted from a loop ramp under Alternative 9 -- to a diamond configuration, and Alternative 10 also provides NB off- and on-ramps at Exit 4 (River Road). Alternative 11 is similar to Alternative 10, with the exception that the local connector to the industrial area and the preservation of a future rail right-of-way connection to the Tradeport has been relocated south to the Exit 3 interchange/Patterson Lane area. This results in a tri-level interchange area with the rail corridor and industrial access road running under Woodbury Avenue and the Turnpike, and the Woodbury Avenue extension traversing above the Turnpike to intersect the new connecting roadway to Nimble Hill Road.

Another alternative, Alternative 12 modifies Alternative 11 by simplifying the roadway connection from Woodbury Avenue and Exit 3 to the Tradeport, and by modifying the SB on-ramp from Exit 3 to reduce wetland impacts and increase traffic weaving distance between the SB Exit 3 on-ramp and the SB Exit 1 off-ramp. Frank concluded by noting that Alternatives 10, 11 and 12 could be modified to provide a SB off-ramp to Nimble Hill Road for the convenience of Newington residents.

At this point, Frank paused and solicited questions or comments on any of the alternatives that were presented. Eleanor Hendricks, Dover Point Road, suggested that the woods in the median of the Turnpike obstructed driver sight distance on the NB approach to the bridge. Chris Waszczuk responded that driver sight distance would be reviewed during the design and construction of the Interim Safety Improvement Project.

A Dover Point Road resident questioned the need for the new NB on-ramp at Exit 6 under Alternatives 1, 2 and 3. In his view, locals are very familiar with the area and won't need nor use the new ramp. He also felt that the only major problems along the Turnpike in Newington are the Exxon driveway and exit 4N. Frank responded that those unfamiliar with the area would find the ramp convenient; otherwise unfamiliar drivers would have to be directed south on the Turnpike (as is the case today) and forced to reverse direction in Newington and cross back over the bridge. Chris Waszczuk added that given the investment in reconstructing the interchange, the NB on-ramp, at a relatively low-cost, should be provided.

Nora Kelley, Dover Point Road, stated her opposition to the proposed grade-separated connection linking the east and west sides of Hilton Park. Frank responded that City representatives and other ATF members have been very clear about the need and desirability of providing a grade-separated connection. Bruce Woodruff concurred, citing the local traffic safety advantages of the proposed grade-separated connection as opposed to Turnpike access and egress at Exit 5. Frank added that the park connection is proposed to be as close to the channel as possible which would offer some landscape design alternatives to enhance the park in proximity to the connector's location. Another resident asked if the grade-separated connector would impact Hilton Park. Frank replied that the bridge alternatives located on the west side of the existing LBB would minimize any impact to Hilton Park. Chris Waszczuk added impacts to Hilton Park would be minimized and any impacts that could not be avoided would be mitigated.

Ray Bardwell stated that the rail alternative that paralleled the Turnpike between Dover and Newington could have significant right-of-way impacts on Spur Road residents. He recommended that the existing free-flow loop ramp from the northbound Turnpike to US 4 westbound be retained. He felt that forcing the large volume of vehicles (including many trucks) to stop at a signal would not be prudent. He also suggested relocating the Toll Plaza south of Exit 6 to pick up the US4 traffic. Chris responded that toll issues are beyond the scope of this project and have statewide ramifications. As such, toll issues are a legislative matter.

Judith Nowack asked if consideration had been given to relocating the bridges, perhaps to their original crossing location between Fox Point and Cedar Point. Chris Waszczuk responded that topography dictates the bridge location, which is located at the narrowest point of the channel. To relocate the bridges and the Turnpike approaches would result in significantly greater impacts than widening or replacing the existing bridges in the existing location.

Representative Pelletier asked if 4-lanes in each direction would be required north of the Toll Plaza. Frank responded that the Turnpike had sufficient capacity north of the Toll Plaza, and that the Toll Plaza has sufficient capacity to process future travel demands.

Ray Bardwell asked if Spur Road right-of-way was being acquired, and if abutters had been approached for right-of-way? Chris Waszczuk responded that no one has been contacted vis-à-vis right-of-way acquisition and indicated that the ROW needs for the project have not developed as of yet.

At this point Frank O'Callaghan presented a preliminary summary table of bridge and roadway impacts and construction costs by alternatives. He explained that the table represented a work in progress, and attempts to provide a quick relative comparison of alternatives vis-à-vis impacts and costs. He cited several examples. In comparing the Dover Roadway Alternatives 1, 2 and 3, Frank noted that wetland impacts ranged from 5.1 acres (Alternative 3) to 7.0 acres (Alternative 1), Local Connectivity ranged from Low (Alternative 1) to High (Alternative 3) and the Total Construction

Costs ranged from a low of $17.8 M (Alternative 2) to a high of $25.9 M (Alternative 1). In Newington, wetland impacts among Alternatives 6R, 7, 9, 10, 11 and 12 ranged from 7.8 acres (Alternative 9) to 10.2 acres (Alternative 10), Total Construction Costs ranged from $28.4 M (Alternative 6R) to $42.7 M (Alternative 7). Frank noted that, depending on which alternatives are combined for Newington, the bridges, and Dover, the estimated total project construction costs could range from $119.6 M to $175.6 M.

There being no questions on the preliminary summary table of bridge and roadway impacts and construction cost estimates, Frank summarized the recommended range of reasonable alternatives to carry forward for detailed analysis in the next phase (DEIS) of the project. He began by noting that the No-Build alternative is required by the federal environmental process to be carried forward as a base case condition that forms the framework for other Alternatives to be measured against. With respect to Transportation System Management (TSM) actions, the following alternatives are recommended to be carried forward:

- NB Exit 6W Deceleration Lane Improvement
- SB Exit 6 On-Ramp Improvement
- Interim Safety Improvement Plan in Newington
- SB Deceleration Lane Improvement at Exit 3
- NB Auxiliary Lane Improvement from Exit 3 to Exit 4

Transportation Demand Management (TDM) alternatives recommended to be carried forward include:

- Expand Downeaster Service (without double tracking Main Line West)
- Restoration of Pease Spur
- Expand Intercity Bus Service (Rochester-Boston)
- Enhance Express Bus Service (Rochester-Portsmouth)
- Enhance Local Bus Services
- Promote Employer-Based Measures

Bridge Alternatives recommended to be carried forward include:

- Rehabilitation and Widening of Little Bay Bridges with General Sullivan Bridge Rehabilitation
- Rehabilitation and Widening of Little Bay Bridges with General Sullivan Bridge Removed
- Replace Little Bay Bridges with General Sullivan Bridge Removed

All of these bridge alternatives are proposed to be located to the west of the existing LBB to avoid/minimize impacts to Hilton Park and the Bloody Point shoreline .

Recommended Roadway Alternatives to be carried forward include:

- Alternative 2 (Dover)
- Alternative 3 (Dover)
- Alternative 10 (Newington)
- Alternative 11 (Newington)
- Alternative 12 (Newington)

Following Frank O'Callaghan's presentation of recommended alternatives to carry forward, there was another round of questions and comments.

A resident asked if the Powerpoint presentation of the meeting could be placed on the project website. Frank responded that the presentation would be posted, following compression of the electronic files since they are very large.

A resident inquired as to the scheduling of some of the TSM and TDM Alternatives. Frank provided clarification: the express COAST service between Rochester and Portsmouth is scheduled for 2006. CMAQ funding has been secured. The park and ride facility at Exit 9 in Dover was recently awarded a CMAQ grant and is scheduled for construction in 2006. The Interim Safety Improvement Plan in Newington is under final design and scheduled for construction in 2005. The recommended TSM improvement of providing an auxiliary lane NB between Exits 3 and 4 will be incorporated into the Interim Safety Improvement Plan. Chris Waszczuk added that the recommended signage improvements on the bridges and at Exit 6, in conjunction with the proposed improvement to the Exit 6W deceleration lane would be implemented this year. In response to a question from Marilyn Follansbee, Dover Point Road, regarding the desirability to expedite the scheduling/implementation of all the bus-related recommendations, Chris stated that a schedule or timeline for these improvements has not been established. Ms. Follansbee added that she agreed with the recommendation to reduce the headways of the local bus service during the 7:00–9:00 AM and 3:00–5:00 PM weekday peak commuter periods. Steve Wells, Executive Director of COAST, responded that additional buses are envisioned beginning at 6:30 AM.

A resident asked if Alternatives 2 and 3 can be modified or tweaked as they progress through the detailed analysis of the next phase of study. Chris Waszczuk responded in the affirmative. Chris then asked attendees if the project team had overlooked anything, or if anyone had any other improvement ideas.

Ray Bardwell identified the need for state police to increase their presence on the bridge approaches so that drivers would obey the law and not switch lanes on the bridges and their approaches. Chris responded that this concern had previously been passed along to the local and state public safety officials, while noting that the confined area of the bridges and approaches make roadside enforcement difficult and challenging. Mr. Bardwell also suggested consideration of a loop ramp instead of the signalized diamond configuration under Alternatives 2 and 3 where the NB off-ramp meets Dover Point Road. The project team will re-review the suitability of a loop ramp.

There being no further questions or concerns, Chris Waszczuk thanked the attendees for coming, and adjourned the meeting at 9:30 PM

cc: J. Brillhart,
C. Waszczuk
M. Dugas
M. Laurin
H. Goodwin (Bureau of Turnpikes)
B. O'Donnell (FHWA)
F. O'Callaghan (VHB)
Paul Beecher, Dover City Manager
Town of Newington Selectboard
Newington-Dover ATF

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING
DOVER CITY HALL
JUNE 30, 2004

Name Brian Greene
Affiliation
Address 393 Dover Pt Rd. Dover, NH
Phone /Email 742-8561 /

Name Bob + Alice Briggs
Affiliation
Address 10 Cote Dr Dover NH
Phone /Email 749-9455 /

Name RICHARD A COUTURE
Affiliation 3 Cemetery Rd
Address Somersworth NH
Phone /Email /

Name Steve Wells
Affiliation COAST
Address 42 Sumner Dr Dover, NH
Phone /Email 743-5777 /

Name Dean Trefethen
Affiliation Dover city Council
Address
Phone /Email /

Name Marilyn Follansbee
Affiliation
Address 25 Dover Pt Rd Dover
Phone /Email 749-3777 /

Name Norman & Eleanor Hendricks
Affiliation
Address 401 Dover Pt Rd
Phone /Email 749 3948 / mh@hendricks.mv.com

Name
Affiliation
Address
Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING
DOVER CITY HALL
JUNE 30, 2004

Name Joyce Mackey
Affiliation Abutter
Address 412 Dover Pt Rd.
Dover N.H.

Phone /Email 742-1675Q

Name Betty Mackey
Affiliation Abutter
Address 330 Dover Pt Rd
Dover, NH 03820

Phone /Email 742 1305Y

Name ROLAND HOFEMANN
Affiliation STATE REP
Address 18 WELLINGTON AVE
DOVER, NH 03820-2002
MAILING LIST.

Phone /Email 749-4154 RHOFEMANN @ AOL.COM

Name JAY MACKEY
Affiliation Abutter
Address 337 Dover Pt. Rd.

Phone /Email 749-5905 /

Name Iris Estabrook
Affiliation State Senate
Address 8 Burnham Ave
Durham NH 03824

Phone /Email /

Name Glean Buttner
Affiliation
Address 354 Dover Pt Rd.
DOVER N.H
please place me on
mailing list

Phone /Email /

Name Nora Kelley
Affiliation
Address 348 Dover Pt Rd
Dover NH 03820

Please place me on mailing list

Phone /Email nkelley@tiac.net

Name Maryann Charos
Affiliation
Address 1 Center Dr
Dover NH 03820
add to mailing list

Phone /Email 749 9173 / Bldbnkr@Aol.com

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING
DOVER CITY HALL
JUNE 30, 2004

Name RAYMOND BORDWELL
Affiliation HOMEOWNER
Address 199 SPEAR ROAD
PLEASE SEND UPDATED INFO. THANKS.
Phone /Email 603-749-6422

Name JOHN BURKE
Affiliation
Address PORTSMOUTH / RPC
Phone /Email 766-1415 /

Name STEVE MARCHAND
Affiliation PORTSMOUTH CITY COUNCIL / RPC
Address 117 CASS ST.
PORTSMOUTH, NH 03801
Phone /Email 431-5007 /

Name
Affiliation
Address
Phone /Email /

Name TIM ROACHE
Affiliation SRPC
Address
Phone /Email TROACHE@STRAFFORD.ORG

Name
Affiliation
Address
Phone /Email /

Name WILLIAM + CASSANDRA MINER
Affiliation
Address 27 BOSTON HARBOR RD
DOVER NH
Phone /Email 742-7057

Name
Affiliation
Address
Phone /Email /

Name Tom & Jean Keegan
Affiliation
Address 19 Boston Harbor Rd
Dover, NH 03820

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Bill O'Donnell, FHWA
Peter Walker, VHB
Frank O'Callaghan, VHB

Date/Time: July 1, 2004

Project No.: 51425.00

Place: Newington Town Hall

Re: Newington-Dover, 11238
Public Informational Meeting

Notes taken by: Frank O'Callaghan

Chris Waszczuk, NHDOT Project Manager, called the meeting to order at 7:05 PM by introducing himself and welcoming those in attendance. He noted that this meeting was the second of two (2) public informational meetings on the Newington-Dover Spaulding Turnpike Improvement project, and that over 40 persons had attended a similar meeting last evening (June 30, 2004) at Dover City Hall. He stated that the project team is looking for feedback, and that public input is important to the success of the project. He reminded all that project information packets were available that would assist them in following and understanding the presentation of project information, and asked everyone to sign in before they leave the meeting. He also noted that a project newsletter was available that included project contacts for additional information.

Chris then introduced Mike Dugas, NHDOT, Marc Laurin, NHDOT, and Frank O'Callaghan, VHB, as members of the project team. He reviewed the composition of the Advisory Task Force (ATF), noting community representation and its purpose of providing guidance to the project team and acting as a conduit for disseminating project information to project stakeholders. Chris noted that the ATF meets regularly, usually every 2 to 3 months, and has met to date seven times over the course of the study.

Chris then reviewed the meeting agenda, noting that it would be interactive in nature, and that four (4) question and answer periods are scheduled during the presentation to make the digestion of information and dialogue with the public as convenient and effective as possible. He then reviewed the project's purpose which is to reduce safety problems and improve transportation efficiency for an approximately 3.5 mile long section of the Spaulding Turnpike beginning at the Gosling Road Interchange in Newington and extending across the Little Bay Bridges to the toll plaza in Dover. Chris then reviewed the project need citing the importance of the Spaulding Turnpike from commuter, commerce, and tourist perspectives; its designation as part of the National Highway System (NHS); and its function as a limited access highway linking the seacoast region with I-95, Concord, the Lakes Region and the White Mountains. He cited the historic growth of traffic and future projections, the poor levels of traffic service, existing geometric constraints and deficiencies and the history of traffic accident experience. Chris also noted that the Turnpike bisects local

residential, recreational and commercial areas, and that there exists a need for local connectivity of motorists, pedestrians and bicyclists between the east and west sides of the Turnpike in both Newington and Dover. He stated that the Little Bay Bridges are major structures located on an important highway in a moderate seismic area and were not designed to meet the current seismic criteria for this region. He noted that the Newington-Dover Spaulding Turnpike project was included in the State's Ten-Year Transportation Improvement Program and was the highest long-term transportation priority of the Seacoast Metropolitan Planning Organization. He stated that as the area continues to develop and future traffic volumes increase, traffic operations and safety conditions would worsen.

Chris then reviewed the five (5) phases of an Environmental Impact Statement (EIS) noting that the EIS is the highest order of study required by the National Environmental Policy Act (NEPA). The project Scoping Report, published in March 2004, summarizes the Phase 1 activities, which included the project's purpose and need statement, inventories of environmental resources, analysis of existing traffic conditions and projections of future travel demands, and the identification of the range of typical alternatives that would be considered. Currently, Phase 2 activities include the development and screening of potential alternatives to carry forward into Phase 3, the Draft EIS, for detailed analysis. Phase 4 is the FHWA/ACOE/NHDES/NHDOT joint Public Hearing on the Preferred Alternative, and Phase 5, the Final EIS, will respond to comments on the DEIS as well as identify the least environmentally damaging practicable alternative (LEDPA). He then reviewed the overall project schedule target dates including September 2004 for completion of Phase 2, and the fall of 2005 for the joint-public hearing. Assuming the availability of funding, construction – which would be phased – could begin as early as 2008. Prior to pausing for any questions on project purpose and need, or the phasing and schedule of the project, Chris noted the importance of public participation in the study, and emphasized the openness of the process. He identified the ATF as a 2-way conduit for stakeholder input and feedback. The ATF meets regularly and Chris noted that the next scheduled ATF meeting will be on August 25, 2004 at Newington Town Hall. He reminded all that there are public information meetings scheduled for each phase of the study, and that meetings with federal and state Resource Agencies are also regularly held to solicit their input. Project newsletters are also prepared at the conclusion of each phase of study, and the project website, www.newington-dover.com, provides a wealth of project related information and another means of public input to the project team.

At this point, Chris paused and asked for questions and/or comments.

Doug Mahoney, Thermo Electron, asked if the completion date for construction of the Newington Interim Safety Improvements was August 2005. Chris Waszczuk responded that it was a separate project and targeted to be completed by the end of 2005.

State Rep. Paul McEachern inquired as to the coordination of the Newington-Dover Turnpike project with the Portsmouth traffic circle and Route 1 Bypass improvement project. Chris responded that both projects are utilizing the same regional travel demand model. Mike Dugas added that with respect to the traffic circle project, there is an active ATF, but the project is not as far along as the Turnpike project. He added that the project includes funding available for the bridges, but not yet for any roadway improvements.

Dave Holden, Portsmouth Planning Department, noted that the City of Portsmouth sees the linkage between the projects and understands that project coordination is on-going.

Cameron Wake, SABR, raised the issue of maintaining bicycle connectivity over the channel during a 4-year or longer construction schedule. Chris Waszczuk responded that traffic management during construction will be challenging at times and result in some additional delays, but that two lanes of traffic are envisioned to be maintained in each direction at all times. While moving traffic safely during construction will be the first priority, Chris stated that every reasonable effort would also be made to accommodate bicycles during construction.

Bill Burtis, Clean Air/Cool Planet, commented on the volume of daily traffic on the Turnpike. Frank O'Callaghan noted that peak hour volumes were more critical than daily volumes from a design perspective.

At this point, Chris Waszczuk reminded the attendees that their input was important. He then introduced Frank O'Callaghan to review the project background. Frank began by describing the project study area as extending north from Exit 1 (Gosling Road/Pease Boulevard) of the Turnpike on the south, traversing the Little Bay Bridges to a point just south of the Dover Toll Plaza, and bounded by the Piscataqua River on the east and Little Bay on the west. He noted many study area issues such as marine habitat, navigation, water quality, tidal and surface wetlands, floodplains, ground water, hazardous materials, visual resources, park and recreational activities, historic and cultural resources and potential residential and commercial property impacts. He stated that air quality and noise were also relevant issues, and each would be analyzed in detail during Phase 3 (DEIS) of the study. He also noted that indirect and cumulative socio-economic impacts would also be identified in the next phase (DEIS) of the study. He stated that the March 2004 Scoping Report summarized many of the inventories of environmental resources.

In summarizing safety conditions, Frank noted that study area traffic accidents during the 1997-2001 period (908 total) increased by approximately 58 percent in comparison to the previous 5-year, 1992-1996, period (575 total). During the 1997-2001period, accidents increased at approximately 11 percent per year in comparison to the average annual traffic volume growth of 3 percent per year. He also reviewed traffic volume growth where average daily traffic (ADT) volume has increased from approximately 30,000 vehicles in 1980, to over 70,000 in 2003, and is projected to grow to over 101,000 vehicles per day by the year 2025. He noted that current weekday peak hour capacity constraints extended from Exit 6 southbound to Exit 3 (Woodbury Avenue) in the morning, and from Exit 4N northbound through Exit 6 in the evening. These capacity conditions are compounded by a number of geometric deficiencies including substandard shoulder width on the Little Bay Bridges, substandard turning radii at many of the interchange on and off ramps, and inadequate weaving distances in both the northbound (River Road) and southbound (Nimble Hill Road) Exit 4N - Exit 4 area. As traffic volumes grow, the safety and traffic operational conditions, which are currently constrained, will worsen.

Frank O'Callaghan then presented some general bridge information for both the Little Bay Bridges and the General Sullivan Bridge. He noted the length, width, main navigation span and vertical clearance of each bridge. The Little Bay Bridges are characterized by substandard shoulder widths and a 3.5 percent grade which limits driver sight distance to a 60 mph design speed (design speed being the maximum safe operating speed governed by the vertical alignment or profile). The 2-lane bridges have minor deterioration and the substructure for both bridges – composed of reinforced concrete – was designed and constructed in 1966 prior to seismic resistance requirements. Frank then enumerated several factors which would affect the rehabilitation alternatives for the General Sullivan Bridge. A 4 percent grade limits driver sight distance to a 45 mph design speed. The cross-section is limited to 24' of pavement and 2'-11" sidewalks on each side. These geometric characteristics and the continuous truss nature of the structure will preclude the rehabilitation and reuse of the bridge to function as two freeway/turnpike lanes to complement the function and operation of the Little Bay

Bridges and Turnpike. In addition, the deck, girders and truss members exhibit major deterioration, and there is extensive substructure deterioration. He noted that the piers are composed of unreinforced granite block and mortar, and in conjunction with the low internal redundancy of the truss design and the fatigue associated with the age (1935 construction) of the structure, the General Sullivan Bridge is more vulnerable to a seismic event than the Little Bay Bridges. The General Sullivan Bridge is also historic – being the second highest-ranking historic bridge in the state -- and subject to costly lead paint removal and re-painting.

At this point Frank paused for questions and comments. A resident asked if the GSB was safe for pedestrian and bicycle travel. Chris Waszczuk responded that the bridge is safe for pedestrians and bicyclists, and would be closed if it were unsafe. It is not safe for carrying vehicular traffic.

There being no further questions or comments, Frank proceeded to review the range of conceptual alternatives that have been developed including Transportation System Management (TSM), Transportation Demand Management (TDM), Bridge Alternatives and Roadway Alternatives. With respect to TSM improvements, Frank noted that these improvements are generally low cost in nature and usually implemented within the existing right-of-way, or require minor right-of-way, to improve safety and/or increase traffic operating efficiency. Examples of TSM-type actions are adding turning lanes and/or increasing traffic control at intersections, or changing pavement markings or increasing regulatory or directional signage.

Within the study area, Frank noted that signage on the bridge approaches that reminds drivers to stay in their lane has already been upgraded, and directional signage for NB travelers connecting to US4 at Exit 6W will be upgraded as part of a construction project this year. He then referred to conceptual graphics and described several TSM alternatives.

Dover TSM 1

This action involves extension of the NB deceleration lane to the loop ramp leading to US 4 at Exit 6W. Restriping of the shoulder area under the overpass will extend the deceleration lane by approximately 400' without impacting the bridge abutment. This measure will prevent peak hour exiting traffic from backing up on the loop ramp onto the Turnpike and blocking NB through traffic on the Turnpike.

Dover TSM 2

This action involves merging the 2-lane SB on-ramp at Exit 6 to a single lane prior to the merge with the main line, coupled with carrying two (2) through lanes on the Turnpike through the Exit 6 interchange to merge with the single SB on-ramp. Currently, the 2 Turnpike through lanes merge to a single lane. The proposed changes will make it safer and easier for drivers to be in the proper lanes (either inside or outside) when planning to exit at Nimble Hill Road or Woodbury Avenue.

Interim Safety Plan (Newington)

The Interim Safety Plan will address the current safety and traffic operational problems at Nimble Hill Road and at River Road due to inadequate weaving distances between these roadways and the median SB to NB turnaround on the Turnpike. By providing a two-way, grade-separated connection under the Turnpike, between Nimble Hill Road and River Road, the median turnaround can be eliminated, thus making the current weaving conditions unnecessary. The existing SB on-ramp from the grade-separated turnaround from River Road will also be eliminated which will remove another safety and traffic operational problem. This project is under final design and scheduled for construction in 2005.

Other Newington TSM Actions

Upon completion of the Interim Safety Plan, the SB deceleration lane to Woodbury Avenue can be extended to provide improved operations. In addition, a NB auxiliary lane can be developed between Woodbury Avenue and River Road to provide a better merging and weaving condition for traffic entering the Turnpike from Woodbury Avenue and for traffic exiting at River Road. In addition, access from Woodbury Avenue to Shattuck Way/River Road via the River Road/Patterson Lane connection would be restricted to emergency vehicles only to preclude NB traffic from diverting to River Road in an attempt to bypass Turnpike traffic and rejoin the Turnpike at Exit 4. The NB auxiliary lane will be included as part of the Interim Safety Project

While reducing the level of traffic turbulence and improving the safety of current traffic operations on both sides of the bridges, Frank reminded all that the basic capacity constraints of the bridges and Turnpike remain, resulting in peak hour congestion and vehicular delay.

Frank then reviewed the Transportation Demand Management (TDM) strategies that have been considered to reduce the overall travel demand within the corridor including rail, bus, park and ride facilities, high occupancy vehicle (HOV) lanes and employer-based measures. He noted that the project team had met with transit operators and regional planning staff in developing these alternatives. With respect to rail, he presented several alternatives.

Expansion of the Downeaster Service

The first rail alternative examined would involve expanding the Downeaster service by one train set. Currently, the Downeaster makes four round trips per day through the study area. However, only one of these trips coincides with the morning peak hour commuter time. Thus, the existing service is really not providing commuter service. By adding an additional train, it is expected that the service would be more convenient to commuters in the study area. The additional train set would run from Dover station to Boston during the weekday AM peak hour, and return from Boston during the PM peak hour. This alternative would require construction of a new layover facility in Dover in addition to the purchase of a new train set.

Based on a conceptual design, the infrastructure investment for this option is expected to cost between $11.5 and $17 million. It was assumed that there would not be a need to double track the existing rail corridor to the Massachusetts state line. If that double tracking is in fact required, then the capital investment would increase to about $110-$115 million. Frank noted that these estimates (for all rail and transit alternatives) did not include operational costs.

Regional Commuter Rail Service

A second rail alternative would involve development of a new commuter rail line to carry passengers between Rochester and Portsmouth. This alternative would utilize the existing Conway Branch line south from Rochester and then run along the Main Line West to Dover. From Dover there are two (2) options: continuing along the MLW to Rockingham Junction, and then running east to Portsmouth along the Portsmouth Branch line; or running south from Dover on new right-of-way paralleling the Turnpike and crossing the channel to meet the Newington Branch Line.

Capital cost estimates for these options range from approximately $145 to $170 million. This would involve upgrading the existing rail lines, purchasing new train sets and building new train stations in Rochester, Somersworth, Newmarket and Portsmouth. The cost estimate does not include operational costs. Preliminary ridership estimates would result in fewer than 100 peak hour vehicles

being removed from the Turnpike for the Rockingham Junction option, and fewer than 150 vehicles being removed for the more direct route paralleling the Turnpike.

Commuter/Tourist Service to Conway

A third rail option would involve extension/upgrading of rail service from Dover along the Conway Branch to Rochester and then north to Conway. This option assumes that the NHDOT would restore the 22 miles of missing track in Ossipee, and could be developed to handle freight service and also serve as a connection for tourists visiting the North Country or Boston. A preliminary cost estimate is approximately $40 million.

Frank explained that ridership numbers are very preliminary and that these rail options appear to remove approximately 50 to 150 peak hour vehicle trips from the Turnpike, a relatively low number in relation to the total traffic volume along the Turnpike.

Pease Spur

A now inactive rail right-of-way exists in Newington which runs from the industrial area on the south and east portion of the study area (the Newington Branch Line), across the Turnpike and then into the Pease Tradeport. The rail right-of-way is at-grade and was active when Pease was used as a military base. Frank pointed out that all of the Newington conceptual roadway alternatives maintain a grade-separated right-of-way corridor for future restoration of this rail service.

Frank then described the three (3) bus alternatives that had been developed and preliminarily assessed:

Expand Intercity Service (Rochester-Boston)

C & J Trailways currently operates a coach service between Dover and Boston via Portsmouth. This service could be expanded by adding coaches and extending the service area to Rochester. The cost of this alternative would be approximately $11.5 million in capital investment.

COAST Express Service

Frank explained that COAST plans to operate new express service between Rochester and Portsmouth along the Turnpike. This service is being funded through a CMAQ grant and is scheduled to begin in 2006. He noted that the express service could be further enhanced by adding Park and Ride facilities at Exit 9 in Dover and at Exit 12 in Rochester. The cost estimate for these Park and Rides is approximately $5 million. The Park and Rides would allow commuters a place to transfer between their private vehicles and the bus service, as well as support ride sharing and van-pooling.

Enhance Local Bus Service

Wildcat Transit and COAST, specifically COAST Route #2 (Rochester-Portsmouth), Wildcat Route #4 (Dover-Portsmouth) and COAST'S Tradeport Trolley operate local bus routes in the study area. These services could be enhanced by adding additional buses to reduce headways and by providing an interconnection/transfer point at Exit 1 which would allow riders to transfer among the local bus operators. In addition, a new Park and Ride facility could be constructed at the intersection of Route 108 and US4 in Durham, which would support the Wildcat #4 route, encourage ride sharing and van-pooling and allow the capture of some traffic that would otherwise go to or from the UNH campus. Capital cost for this enhancement is expected to be about $6.5 million.

There is some overlap among these bus alternatives. Therefore, if the three (3) alternatives were bundled and implemented together, the capital cost of the entire package would be about $16 million. Preliminary analysis indicates that ridership for these bus alternatives would be equal to the rail alternatives - at a fraction of the cost. Frank noted that analysis of ridership continues. He concluded by stating that new park and ride facilities were proposed at Exit 9 in Dover, at Exit 12 in Rochester and at the US4/NH108 interchange in Durham. Such a site would also benefit Durham and UNH by allowing UNH visitors to park remotely and be shuttled to the campus.

With respect to High Occupancy Vehicle (HOV) and Reversible Lane alternatives, Frank described two (2) main options that were examined, in comparison to a standard 8-lane (4 NB and 4 SB) roadway cross-section, to potentially reduce the scale of future roadway and bridge infrastructure improvements. He reminded all that future travel demands require 4-lanes in each direction assuming current travel characteristics (i.e. mode split, vehicle occupancy rates, work hours, travel patterns, etc.).

Frank used a graphic to illustrate the cross-section of each of the options. The first option would be a 2+2+2 lane cross section, with the center two lanes intended as HOV or reversible lanes. The total cross-section of this alternative would be approximately 132 feet. However, the results of the traffic modeling completed to date indicate that a minimum of three lanes in the off-peak direction during summer and fall peak hours would be needed to meet future travel demands. Therefore, this option was not being pursued..

A second HOV concept would involve a 3+1+3 lane cross-section. The center lane would be an HOV or a reversible lane. Frank explained that in order for HOV lanes to be effective, they must be used by approximately 800 vehicles or more per peak hour. However, the traffic model predicts approximately 300 vehicles per hour would use the HOV lane assuming it would start at the Dover Toll Plaza and extend to I-95 in Portsmouth. Since potential traffic volumes would not justify this alternative, a second option was explored running from just south of Exit 6 to just north of Exit 1. This alternative would potentially maximize HOV ridership by extending HOV access to traffic from US4, Dover Point Road, and the Pease Tradeport. Unfortunately, given the compactness of the study area, the relatively short distance between Exits 6 and 1, and the distance necessary to safely accommodate the merging and weaving of traffic to enter and exit the HOV lane, this alternative was infeasible from a traffic safety and operations perspective. A third alternative was considered which assumed an HOV lane running from the Dover Toll Plaza to Exit 1. Similar to Alternative 1, the potential ridership estimate falls approximately 40% below the necessary threshold to justify its use.

In light of the infeasibility of HOV use, the 3+1+3 lane concept was tested from a reversible lane use perspective. Under this concept, the reversible lane would be utilized by the peak flow in the peak hour (i.e., southbound in the AM and northbound in the PM) and open to all vehicles. If this reversible lane extended from the Toll Plaza to Exit 1, approximately 1,500 vehicles per peak hour would use the lane, which is enough ridership to justify its use. Frank explained that this 3+1+3 cross-section would be approximately 152 feet in pavement width due to the shoulders and barriers that would need to be constructed between the reversible lane and the adjacent northbound and southbound lanes. He noted that this cross-section would actually be wider than the approximately 146-foot cross-section required for a typical 8-lane (4 NB and 4 SB) cross-section. As such, VHB concluded that the 3+1+3 reversible lane concept failed to offer a significant advantage over the traditional 8-lane cross-section -- the 3+1+3 cross-section was wider than the typical 8-lane section and presented additional operational and maintenance costs. Frank added, however, that the 8-lane cross-section affords the flexibility to convert the inside shoulder/lanes to HOV or exclusive transit use in the future.

Frank then reviewed employer-based TDM strategies which could include transit subsidies, ride sharing, vanpools, alternative work schedules, bike and pedestrian facilities, on-site amenities (daycare, cafeteria, showers, bicycle storage areas) and a guaranteed ride home program.

Frank next reviewed bridge alternatives. Conceptually speaking, he noted that widening the existing Little Bay Bridges from 4 to 8 lanes had been considered to the west side of the existing bridges, to the east side of the existing bridges and to both sides of the existing bridges assuming that the General Sullivan Bridge (GSB) was rehabilitated for a future use. Replacing the Little Bay Bridges (LBB) with a new bridge that includes a multi-use path (assuming the removal of the GSB) was also considered. Such a new bridge could be of a signature type structure, e.g. a cable-stayed or concrete arch. He noted that widening or replacing the LBB to the west of the existing bridges would minimize potential impacts to Hilton Park and the shoreline near Bloody Point. Frank also stated that double decking of the existing bridges was also considered in hopes of minimizing the footprint of the bridges and reducing private property and environmental resource impacts on the bridge approaches. Preliminary analysis indicated that these impacts were not significantly reduced in comparison to the previously described west side bridge widening or bridge replacement alternatives, and the double-decker alternative had the additional impacts of higher cost, difficult traffic control during construction and adverse visual aesthetics.

With respect to the General Sullivan Bridge, Frank described several reuse alternatives including a multi-use path for pedestrians and bicyclists; a pedestrian, bicyclist and restricted (6 ton) vehicle or unrestricted vehicle open to local traffic; and a pedestrian, bicyclist and transit vehicle only use. Rehabilitation costs would range from $19 M to $22 M. To replace the GSB would cost approximately $36 M, and to remove it, approximately $5 M. If rehabilitated, periodic (every 25 years) repainting and structural repairs would cost approximately $4.3 M (in 2004 dollars), and deck replacement (every 35 years) would cost approximately $1.4 M (in 2004 dollars). Frank concluded his description of bridge alternatives by reviewing a cost summary matrix of LBB and GSB combined alternatives. The LBB alternatives, which included rehabilitation of the GSB, ranged in cost from $68 M to $90 M. The LBB alternatives which entailed removal of the GSB ranged in construction cost from $57 M to $100 M.

Frank then proceeded to summarize the conceptual roadway alternatives, beginning in Dover. He reviewed three (3) Dover roadway alternatives noting that two-way flow on the Turnpike overpass and the provision of a new NB on-ramp at exit 6 were common to all alternatives. He noted that Alternative 1 provided a two-lane loop ramp for the NB Turnpike connection to WB US4, and that the at-grade connection from Hilton Park and the Wentworth Terrace neighborhood to Dover Point Road resulted in a relatively high number of property impacts in comparison to Alternatives 2 and 3. Frank stated that the E-W connection of Hilton Park for local motorized and non-motorized traffic is an important element from the City of Dover's perspective. Also, the City would consider accepting less efficient traffic operation at Exit 6 if property impacts could be reduced. Frank then described Alternative 2, which provides a grade-separated E-W connection of Hilton Park, and provides the NB Turnpike connection to WB US4 via a diamond-type signal controlled intersection. In comparison to Alternative 1, property impacts are substantially reduced and traffic operation at the four (4) signalized intersections are satisfactory. Alternative 3 modifies Alternative 2 by providing a grade-separated connection between Spur Road and Boston Harbor Road. This connection – under the US 4 overpass and the SB on-ramp to the Turnpike – enables local traffic to connect with Boston Harbor Road and Hilton Park without traversing the interchange area, and allows elimination of the Spur Road traffic signal by restricting turning movements to right-turns only.

Frank then reviewed the Newington roadway alternatives reminding all that Newington representatives had initially indicated community support for Alternatives 6 and 7 contained in the 2000 Spaulding Turnpike Feasibility Study. Alternative 6 maintains interchanges at both Exits 3 and 4, provides a right-of-way for a future railroad connection (paralleling Patterson Lane) to the Tradeport at Exit 3, and would provide an ideal at-grade location for a crossover between the NB and SB barrels of the Turnpike for incident management. He noted that Alternative 6 lacked a connection between the Turnpike and the industrial area located between Shattuck Way and the riverfront, and that local traffic from Nimble Hill Road to Woodbury Avenue is required to use the Turnpike (assuming that drivers decline to use the circuitous back route of River Road and Shattuck Way). Frank noted that the SB off-ramp to Woodbury Avenue at Exit 3 had been relocated slightly to the north (revising the original concept) to avoid impacting access to the City of Portsmouth's water tower. Alternative 7 combines Exits 3 and 4 at a new single point diamond interchange. This alternative provides roadway connections to both the Tradeport and the River Road-Shattuck Way industrial area, free-flow connections between the Turnpike and Woodbury Avenue, right-of-way for a future rail connection to the Tradeport that parallels Patterson Lane, and a local connector between Nimble Hill Road and Woodbury Avenue. Local access to future development at the former drive-in site could also be provided. Projected traffic volumes require a double NB on-ramp, which is problematic given the limited distance to merge prior to the bridge. The elevated structure of the Turnpike will present a visual impact, and the cost of the interchange (based on the 2000 Feasibility Study) will be approximately 50 percent higher than Alternative 6 Revised.

Alternative 9 combines the current Exits 3 and 4 at the location of the existing Exit 3 via a SB two-lane loop off ramp and a NB diamond type interchange. The local roadway connection to the Tradeport and the River Road – Shattuck Way industrial area is provided adjacent to the existing railroad right-of-way, which is preserved for a future connection to the Tradeport. A local roadway connects Nimble Hill Road to Exit 3 and Woodbury Avenue. The distance between the two-lane NB on-ramp at Exit 3 and the Little Bay Bridges is adequate for traffic merging prior to the bridge. Access to the former drive-in site could be provided from the local connector. Frank noted that the ATF reviewed Alternatives 6, 7, and 9 at the March 31 workshop meeting, and advised VHB to drop Alternative 7, and to focus on combining the best elements of Alternatives 6 and 9 into a new concept. To that end, he then described Alternatives 10 and 11.

Alternative 10 is similar to Alternative 9 in that it combines the current Exits 3 and 4 at the location of the existing Exit 3 for SB traffic, and maintains the local roadway connection to the Tradeport and the River Road – Shattuck Way industrial area adjacent to the existing railroad right-of-way, which is preserved for a future connection to the Tradeport. The local roadway connection from Nimble Hill Road to Exit 3 and Woodbury Avenue is also maintained. However, the SB off-ramp at Exit 3 has been converted from a loop ramp under Alternative 9 -- to a diamond configuration, and Alternative 10 also provides NB off- and on-ramps at Exit 4 (River Road). Alternative 11 is similar to Alternative 10, with the exception that the local connector to the industrial area and the preservation of a future rail right-of-way connection to the Tradeport has been relocated south to the Exit 3 interchange/Patterson Lane area. This results in a tri-level interchange area with the rail corridor and industrial access road running under Woodbury Avenue and the Turnpike, and the Woodbury Avenue extension traversing above the Turnpike to intersect the new connecting roadway to Nimble Hill Road.

Another alternative, Alternative 12 modifies Alternative 11 by simplifying the roadway connection from Woodbury Avenue and Exit 3 to the Tradeport, and by modifying the SB on-ramp from Exit 3 to reduce wetland impacts and increase traffic weaving distance between the SB Exit 3 on-ramp and the SB Exit 1 off-ramp. Frank concluded by noting that Alternatives 10, 11 and 12 could be modified to provide a SB off-ramp to Nimble Hill Road for the convenience of Newington residents.

At this point, Frank paused for questions and comments.

Doug Wilhelm, Thermo Electron Corp., asked if, under the Newington Interim Safety Improvement Plan, the Turnpike on-ramp from Nimble Hill Road was longer than the existing on-ramp. Chris Waszczuk responded that the proposed on-ramp is longer, in comparison to the existing condition, by approximately 1,000 feet. Also, a curbed island will be constructed as part of the interim project to preclude direct egress from the Exxon driveway to the Turnpike travel lane.

Gail Klanchesser, Coleman Drive, commented that park and ride facilities should be considered as close as possible to the origin of traffic, and that the proposed facility at the NH108/US4 interchange was too close to the UNH destination. Frank responded that the primary function of the three (3) proposed park and ride facilities – Exit 12 (Rochester), Exit 9 (Dover) and US4/NH108 was, in fact, to intercept traffic prior to reaching the study area and traversing the bridges. With respect to the US4/NH108 proposal, its function as a remote parking area for UNH related traffic is secondary in nature, yet is of benefit to UNH and Durham by potentially reducing local parking and traffic circulation pressures.

Jack Pare, a Newington resident suggested that moving goods by rail might be more cost-effective than by truck if one considers a regional area, in comparison to the smaller project area. Chris Waszczuk replied that the project need is focused on the project area.

Scott Bogle, RPC, noted that the transit ridership estimates were for 2025. He asked why the bus rapid transit alternative was higher in construction cost that the commuter rail alternative running between Rochester and Portsmouth. Frank responded that the fixed guideway construction was more costly (approximately $10 million).

Donna Callahan, noting that Alternative 1 was not included in the informational handout, asked if Alternative 1 was being dropped from further consideration. Frank O'Callaghan replied that Alternative 1 was not being recommended as one of the alternatives to carry forward.

With respect to the Newington alternatives, Bill Verge asked if reconstructing Fox Run Road could serve as an industrial connector. Frank responded that grade separation of Fox Run Road with the Turnpike would affect access to roadside abutters on both sides of the Turnpike. He added that using Fox Run Road as the industrial traffic connector to Exit 3 and the Turnpike would be counter to the town of Newington's goal to segregate industrial traffic from local residential and retail shopping related traffic. Frank then reviewed the Newington alternatives noting the Town's desire to segregate the industrial related traffic from retail generated and local traffic. Newington Fire Chief, Roy Greenleaf, asked if consideration had been given to transporting hazardous materials. Frank replied that reconstruction of existing facilities and construction of new facilities would reflect current engineering design standards which will accommodate heavy commercial vehicles, and that the aforementioned industrial connector is planned to segregate industrial related traffic from local traffic. The Chief also noted the gas line running parallel to Patterson Lane. Frank acknowledged that the project team was aware of the utility corridor and would plan accordingly.

Ed Fish expressed concern over potential emissions and noise protection. Frank noted that detailed air quality and noise impact analyses would be conducted during the next phase of the study. If air quality or noise standards are exceeded, mitigation plans will be developed. Chris Waszczuk added that base condition data has been collected so that future alternatives may be modeled.

Bill Burtis, Clean Air/Cool Planet, asked if the air quality analysis will include an analysis of CO_2 impacts. Frank replied that the project would meet all federal air quality requirements. With respect to transit alternatives, Bill inquired as to the assumptions reflected in the preliminary ridership estimates. Frank responded that the ridership estimates reflect comparisons of driver and transit trip impedance factors related to travel time and cost (e.g. cost of time, fuel, parking, transit fare).

Cameron Wake, SABR, asked if four lanes were being planned for both NB and SB bridges. Chris Waszczuk responded that the existing two lanes in each direction are over capacity, and that future travel demand projections require four lanes in each direction. He noted that one of the four lanes functions as an auxiliary lane to facilitate the safe and efficient merging and weaving of traffic as drivers enter and exit the Turnpike between Woodbury Avenue (Exit 3) and US4/Dover Point Road (Exit 6). Cameron suggested that a harder look at TDM alternatives might avoid the need for four lanes in each direction. Frank responded that the challenge is to develop a smart solution that meets the project purpose and need, and is also practical, permitable, affordable and supported by the communities. He stated that at this point in time, the project team is not convinced that a 3-lane alternative in conjunction with a package of TDM actions will meet the projected travel demand. Cameron asked if four lanes were inevitable. Chris Waszczuk replied that it appears at this time that four lanes in each direction are needed.

Cameron Wake also questioned the potential disposition of the General Sullivan Bridge (GSB), noting the need to retain a bicycle and pedestrian connection across the channel. Chris Waszczuk replied that all of the bridge alternatives provide for a bicycle/pedestrian connection, and that an entire group of alternatives provides this connection by rehabilitation of the GSB.

Bill Verge inquired as to historic property impacts. At this point, Frank referred to a preliminary summary table of bridge and roadway impacts and construction costs by alternatives. He explained that the table represented a work in progress, and attempts to provide a quick relative comparison of alternatives vis-à-vis impacts and costs. He cited several examples. In comparing the Dover Roadway Alternatives 1, 2 and 3, Frank noted that wetland impacts ranged from 5.1 acres (Alternative 3) to 7.0 acres (Alternative 1), Local Connectivity ranged from Low (Alternative 1) to High (Alternative 3) and the Total Construction Costs ranged from a low of $17.8 M (Alternative 2) to a high of $25.9 M (Alternative 1). Frank then reviewed the six Newington alternatives, each of which identified the impact of a single historic property – the Isaac Dow House, located on Woodbury Avenue. Chris Waszczuk noted that the historic impact issues would be addressed in the 4(f) process. He added that Mr. Verge could request to become a consulting party in this process, and that the project team would explore the feasibility of alternatives that may avoid or minimize impact to this property.

Before proceeding to present the alternatives recommended to carry forward, Frank noted that, depending on which alternatives are combined for Newington, the bridges, and Dover, the estimated total project construction costs could range from $119.6 M to $175.6 M.

Frank then summarized the recommended range of reasonable alternatives to carry forward for detailed analysis in the next phase (DEIS) of the project. He began by noting that the No-Build alternative is required by the federal environmental process to be carried forward as a base case condition that forms the framework for other Alternatives to be measured against. With respect to Transportation System Management (TSM) actions, the following alternatives are recommended to be

carried forward:

- NB Exit 6W Deceleration Lane Improvement
- SB Exit 6 On-Ramp Improvement
- Interim Safety Improvement Plan in Newington
- SB Deceleration Lane Improvement at Exit 3
- NB Auxiliary Lane Improvement from Exit 3 to Exit 4

Transportation Demand Management (TDM) alternatives recommended to be carried forward include:

- Expand Downeaster Service (without double tracking Main Line West)
- Restoration of Pease Spur
- Expand Intercity Bus Service (Rochester-Boston)
- Enhance Express Bus Service (Rochester-Portsmouth)
- Enhance Local Bus Services
- Promote Employer-Based Measures

Bridge Alternatives recommended to be carried forward include:

- Rehabilitation and Widening of Little Bay Bridges with General Sullivan Bridge Rehabilitation
- Rehabilitation and Widening of Little Bay Bridges with General Sullivan Bridge Removed
- Replace Little Bay Bridges with General Sullivan Bridge Removed

All of these bridge alternatives are proposed to be located to the west of the existing LBB to avoid/minimize impacts to Hilton Park and the Bloody Point shoreline.

Recommended Roadway Alternatives to be carried forward include:

- Alternative 2 (Dover)
- Alternative 3 (Dover)
- Alternative 10 (Newington)
- Alternative 11 (Newington)
- Alternative 12 (Newington)

Following Frank O'Callaghan's presentation of recommended alternatives to carry forward, there was another round of questions and comments.

A resident asked, in comparing the relative construction costs of Alternatives 10, 11 and 12, why is Alternative 10 the lowest? Frank responded it was due in part to lower bridge costs; Chris Waszczuk added that the location of the Pease rail spur was also a cost factor.

Bill Burtis asked if the Interim Safety Plan was reflected in the Newington alternatives. Frank confirmed that it was.

Jack Pare, a Newington resident expressed concern about the strong currents in the channel, and the affect the new or widened piers and footings could have on the currents and channel navigation. Chris responded that the project team has experts from UNH who are developing a hydrodynamic model of the channel to assess such impacts.

Chris Waszczuk asked attendees if the project team was on the right track vis-à-vis the range of recommended alternatives. Bill Burtis asked, assuming construction of eight lanes, when would the new facility reach capacity. Frank O'Callaghan responded that capacity would be reached sometime after 2025. He noted that new or improved bridge and highway infrastructure is usually designed for level of traffic (LOS) 'C' operations (with levels of service ranging from 'A' at best to 'F' at worst, and LOS 'E' representing capacity). Given the sensitive environmental resources of the study area, and the desire to minimize potential impacts, LOS 'D' is being used as a design criterion. Chris Waszczuk added that it is NHDOT's policy not to widen beyond four through lanes in each direction.

Scott Bogle asked if the induced growth results of the regional econometric model would be worked back into the overall travel demand projections. Chris Waszczuk responded that the traffic model has a land use component, which the planning commissions used to forecast the future growth in the region, and as such induced growth impacts should be accounted for. Scott asked if there would be travel demand projections and analysis beyond the 2025 planning horizon. Frank replied that there are no plans to project travel demand beyond 2025.

Given that the 2025 travel demand projections require four lanes in each direction assuming current travel characteristics, Bill Burtis suggested modeling the TDM alternatives assuming only three lanes in each direction. By providing less roadway capacity (3 lanes) than required (4 lanes), potential ridership for TDM alternatives should be maximized. Frank responded that the current TDM analysis of alternatives does, in fact, assume only three lanes of travel in each direction, and as such, is capacity constrained.

Jack Pare suggested that it would be prudent to reflect the planning for future rail or transit into the bridge and roadway design plans for travel beyond 2025.

There being no further questions or comments, Chris Waszczuk thanked all for attending and offering their input, and adjourned the meeting at 9:45 PM.

cc: J. Brillhart
C. Waszczuk
M. Dugas
M. Laurin
H. Goodwin (Bureau of Turnpikes)
B. O'Donnell (FHWA)
F. O'Callaghan (VHB)
Paul Beecher, Dover City Manager
Town of Newington Selectboard
Newington-Dover ATF

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING
NEWINGTON TOWN HALL
JULY 1, 2004

Name Donald E Black
Affiliation
Address 33 Fox Run Rd. Newington NH

Phone /Email /

Name BILL BURNS
Affiliation CLEAN AIR - COOL PLANET
Address 100 MARKET ST. PORTSMOUTH, NH

Phone /Email bburns@cleanair-coolplanet.org

Name Brad Loomis
Affiliation Newington PD
Address 71 Fox Pt Rd Newington NH 03801

Phone /Email 431-5461 / bloomis@Newingtonnhpd.com

Name Jack Pare
Affiliation Newington Planning Board
Address 188 Little Bay Rd Newington NH 03801

Phone /Email 436-6415 / Jack Pare@comcast.net

Name Gail Klanchesser
Affiliation Resident
Address 18 Coleman Dr. Newington, NH 03801

Phone /Email 431-5033 / gklanchesser@comcast.net

Name Roy Greenlaw
Affiliation Newington Fire
Address 80 Fix Point rd Newington, N.H

Phone /Email 436-9441 / RGreenlaw@Newingtonfire.org

Name John Klanchesser
Affiliation Resident
Address 18 Coleman Dr Newington NH 03801

Phone /Email 431-5033 /

Name Doug Wilhelm
Affiliation Thermo Electron Corp
Address 25 Nimble Hill Rd. Newington, NH

Phone /Email 430-2206 / doug.wilhelm@thermo.com

Name PHIL & BARBARA TOOMIRE
Affiliation
Address 48 NIMBLE HILL RD
NEWINGTON, NH 03801

Phone /Email /

Name JACK BERNIER
Affiliation 25 WENTWORTH TERRACE
Address

Phone /Email /

Name JOHN FRINK
Affiliation PLANNING BD
Address 272 NIMBLE HILL RD
NEWINGTON

Phone /Email /

Name DONALD GRASSI
Affiliation DAV 19 RIVER RD
Address 4 BOYCE RD
EliOT ME 03903

Phone /Email /

Name FRANK SHEPARD
Affiliation DAV
Address 5 SEWALL Road
Portsmouth NH

Phone /Email /

Name CHRIS ABBOTT
Affiliation
Address HANNAH LANE
Newington

Phone /Email SKIP28408@HOTMAIL.COM

Name ED FISH
Affiliation DAV CHAPTER
Address 272 COLONIAL DR
PORTSMOUTH

Phone /Email /EDFISHJR@AOL.COM

Name
Affiliation
Address

Phone /Email /

Name Dave Daniels
Affiliation
Address 27 Wentworth terrace

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name Chris CROSS
Affiliation Newington Resident
Address on file

Phone /Email ____ / ____

Name Chris Bellmare.
Affiliation Newington Resident.
Address 165 Little Bay rd.

Phone /Email ____ / Cbellmar@yahoo.com

Name Conrad J. Morin
Affiliation DAV
Address 93 Woodlawn Cir
Portsmouth, NH

Phone /Email 603 431-8685

Name Bud O'Donnell
Affiliation ~~Town Hall~~
Address ____

Phone /Email ____ / ____

Name CAMERON WAKE
Affiliation SABR
Address PO Box 412
Durham, NH 03824

Phone /Email ____ / info@seacoastbikes.org

Name RAS Nichols
Affiliation COAST
Address 42 Summer DR.
Dover, NH 03820

Phone /Email 743-5777 / rnichols@coastbus.org.

Name Dorothy M WATSON
Affiliation Newington Resident
Address 133 Fox Point Rd
Newington, NH 03801

Phone /Email ____ / ____

Name ____
Affiliation ____
Address ____

Phone /Email ____ / ____

Name ____
Affiliation ____
Address ____

Phone /Email ____ / ____

Name ____
Affiliation ____
Address ____

Phone /Email ____ / ____

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Bill Cass, NHDOT
Doug DePorter, NHDOT
Ed Woolford, FHWA
Bill O'Donnell, FHWA
Pete Walker, VHB
Tom Wholley, VHB
Frank O'Callaghan, VHB

Date/Time: May 18, 2005

Project No.: 51425

Place: Dover City Hall

Re: Public Information Meeting
Newington-Dover, 11238

Notes taken by: Frank O'Callaghan

Chris Waszczuk, NHDOT Project Manager, called the meeting to order at 7:10 PM. He welcomed those in attendance and introduced the project team: Mike Dugas, Marc Laurin, Bill Cass and Doug DePorter from the NHDOT, Bill O'Donnell and Ed Woolford from FHWA, and Frank O'Callaghan, Pete Walker and Tom Wholley from VHB. He reviewed the meeting agenda, noting that the project team was looking for input, and that there were three (3) scheduled breaks in the presentation of material for public comment and questions.

Chris reviewed the project's purpose which is to reduce safety problems and improve transportation efficiency for an approximately 3.5 mile long section of the Spaulding Turnpike beginning at the Gosling Road Interchange in Newington and extending across the Little Bay Bridges to a point just south of the toll plaza in Dover. Chris then reviewed the project need citing the importance of the Spaulding Turnpike from commuter, commerce, and tourist perspectives; its designation as part of the National Highway System (NHS); and its function as a limited access highway linking the seacoast region with I-95, Concord, the Lakes Region and the White Mountains. He cited the historic growth of traffic and future projections, the poor levels of traffic service, existing geometric constraints and deficiencies and the history of traffic accident experience. He noted that the compactness of the 3.5 mile study area and short spacing between the six (6) interchanges within this section of the Turnpike constrain traffic operations, and exacerbate the impacts of a traffic accident, given the lack of suitable alternate routes to the Turnpike. Chris also noted that the Turnpike bisects local residential, recreational and commercial areas, and that there exists a need for local connectivity of motorists, pedestrians and bicyclists between the east and west sides of the Turnpike in both Newington and Dover. He stated that the Little Bay Bridges are major structures located on an important highway in a moderate seismic area and were not designed to meet the current seismic criteria for this region. He noted that the Newington-Dover Spaulding Turnpike project was included in the State's Ten-Year Transportation Improvement Program and was the highest long-term transportation priority of the Seacoast Metropolitan Planning Organization. He stated that as the

area continues to develop and traffic volumes increase, traffic operations and safety conditions would worsen. If nothing is done to improve the Turnpike, it is estimated that 2025 weekday periods of traffic congestion will lengthen to more than three times the existing congested periods.

Chris then reviewed the five (5) phases of an Environmental Impact Statement (EIS) noting that the EIS is the highest order of study required by the National Environmental Policy Act (NEPA). The project Scoping Report, published in March 2004, summarizes the Phase 1 activities, which included the project's purpose and need statement, inventories of environmental resources, analysis of existing traffic conditions and projections of future travel demands, and the identification of the range of typical alternatives that would be considered. The Rationale Report, published in January 2005, and available on the project website, summarizes the development, screening and range of reasonable alternatives to be carried forward into Phase 3 of the study. Current Phase 3 activities include the detailed evaluation and impact analysis of alternatives, and the identification of a preferred alternative. He noted that there would be Public Information Meetings scheduled for the fall (2005) to discuss the preferred alternative. At the conclusion of Phase 3 in January 2006, a draft Environmental Impact Statement (DEIS) will be published. A joint FHWA/ACOE/NHDES/NHDOT Public Hearing (Phase 4) on the Preferred Alternative is targeted for April 2006. Phase 5, which is scheduled for September 2006 – June 2007, will focus on finalizing the EIS by responding to comments on the Draft EIS and comments from the Public Hearing. Assuming the availability of funding and procurement of the necessary approvals and permits, construction could begin as early as 2008.

Chris concluded his introductory remarks by noting the importance of public participation, and the openness of the process. He explained that a project Advisory Task Force – comprised of representatives of the municipalities of Newington, Dover, Portsmouth and Durham, the Rockingham and Strafford Regional Planning Commissions, COAST, the Pease Development Authority, the Great Bay Estuarine Research Reserve, and the Greater Dover and Portsmouth Chambers of Commerce, FHWA and NHDOT – has met 12 times during the course of the study and acts as a forum for communication, providing early and continuous input to the project team and feedback to their respective constituencies. In addition, Public Information Meetings are planned during each phase of the project in both Dover and Newington locations, and a project website, www.newington-dover.com, is maintained that provides a wealth of project related information, and is another means of public input to the project team.

At this point, Chris paused and asked for questions or comments. There being none, he introduced Frank O'Callaghan to review the project background, Frank began by describing the project study area as extending north from Exit 1 (Gosling Road/Pease Boulevard) of the Turnpike on the south, traversing the Little Bay Bridges to a point just south of the Dover Toll Plaza, and bounded by the Piscataqua River on the east and Little Bay on the west. He noted many study area resources and issues such as marine habitat, navigation, water quality, tidal and surface wetlands, floodplains, ground water, hazardous materials, visual resources, park and recreational activities, historic and cultural resources and potential residential and commercial property impacts. He stated that air quality and noise were also relevant issues, and each is being currently analyzed in detail during Phase 3 (DEIS) of the study. He noted that his colleague, Tom Wholley, would present some preliminary findings on noise impacts later in the presentation. He also noted that direct and indirect and cumulative socio-economic impacts are also being currently identified and analyzed during the current phase (DEIS) of the study. He stated that the March 2004 Scoping Report summarized many of the inventories of environmental resources.

In summarizing safety conditions, Frank noted that study area traffic accidents during the 1997-2001 period (908 total) increased by approximately 58 percent in comparison to the previous 5-year, 1992-

1996, period (575 total). During the 1997-2001period, accidents increased at approximately 11 percent per year in comparison to the average annual traffic volume growth of 3 percent per year. He also reviewed traffic volume growth where average daily traffic (ADT) volume has increased from approximately 30,000 vehicles in 1980, to over 70,000 in 2003, and is projected to grow to over 94,000 vehicles per day by the year 2025. He noted that current weekday peak hour capacity constraints extended from Exit 6 southbound to Exit 3 (Woodbury Avenue) in the morning, and from Exit 3 northbound through Exit 6 in the evening. These capacity conditions are compounded by a number of geometric deficiencies including substandard shoulder width on the Little Bay Bridges, substandard turning radii at many of the interchange on and off ramps, and inadequate weaving distances in both the northbound (River Road) and southbound (Nimble Hill Road) Exit 4N - Exit 4 area. As traffic volumes grow, the safety and traffic operational conditions, which are currently constrained, will worsen. For example, if the Turnpike is not improved, current weekday peak hour periods of congestion will double in the morning and more than triple in the evening by 2025.

Frank O'Callaghan then presented some general bridge information for both the Little Bay Bridges and the General Sullivan Bridge. He noted the length, width, main navigation span and vertical clearance of each bridge. The Little Bay Bridges are characterized by substandard shoulder widths and a 3.5 percent grade which restricts driver sight distance to a 60 mph design speed (design speed being the maximum safe operating speed governed by the vertical alignment or profile). The 2-lane bridges have minor deterioration and the substructure for both bridges – composed of reinforced concrete – was designed and constructed in 1966 prior to the current, more stringent seismic resistance requirements. Frank then enumerated several factors which would affect the rehabilitation alternatives for the General Sullivan Bridge. A 4 percent grade limits driver sight distance to a 45 mph design speed. The cross-section is limited to 24' of pavement and 2'-11" sidewalks on each side. In addition, the deck, girders and truss members exhibit major deterioration, and there is extensive substructure deterioration. The General Sullivan Bridge is also historic – being the second highest-ranking historic bridge in the state -- and subject to costly lead paint removal and re-painting.

At this point Frank paused for questions and comments. There being none, Frank proceeded to review the alternatives that have been carried forward for further study. In addition to the No-Build, Transportation System Management (TSM), Transportation Demand Management (TDM), Bridge Alternatives, Roadway Alternatives and combinations thereof have been progressed. With respect to TSM improvements, Frank noted that these improvements are generally low cost in nature and usually implemented within the existing right-of-way, or require minor right-of-way, to improve safety and/or increase traffic operating efficiency. Examples of TSM-type actions are adding turning lanes and/or increasing traffic control at intersections, or changing pavement markings or increasing regulatory or directional signage.

Within the study area, Frank noted that signage on the bridge approaches that reminds drivers to stay in their lane has already been upgraded, and directional signage for NB travelers connecting to US4 at Exit 6W are being upgraded as part of a current construction project. He then referred to conceptual graphics and described several TSM alternatives.

Dover TSM 1

This action involves the extension of the NB deceleration lane to the loop ramp leading to US 4 at Exit 6W. Restriping of the shoulder area under the overpass will extend the deceleration lane by approximately 400' without impacting the bridge abutment. This measure will prevent peak hour exiting traffic from backing up on the loop ramp onto the Turnpike and blocking NB through traffic on the Turnpike. *[Note: This was implemented in 6/2005.]*

Dover TSM 2

This action involves merging the 2-lane SB on-ramp at Exit 6 to a single lane prior to the merge with the main line, coupled with carrying two (2) through lanes on the Turnpike through the Exit 6 interchange to merge with the single SB on-ramp. Currently, the two (2) Turnpike through lanes merge to a single lane. The proposed changes will make it safer and easier for drivers to be in the proper lanes (either inside or outside) when planning to exit at Nimble Hill Road or Woodbury Avenue.

Interim Safety Plan (Newington)

The Interim Safety Plan will address the current safety and traffic operational problems at Nimble Hill Road and at River Road due to inadequate weaving distances between these roadways and the median SB to NB turnaround on the Turnpike (Exit 4N). By providing a two-way, grade-separated connection under the Turnpike, between Nimble Hill Road and River Road, the median turnaround will be eliminated, thus eliminating the current weaving conditions. The existing SB on-ramp from the grade-separated turnaround from River Road will also be eliminated which will remove another safety and traffic operational problem. This project is designed and construction will be initiated by next month (June 2005).

Other Newington TSM Actions

Upon completion of the Interim Safety Plan, the SB deceleration lane to Woodbury Avenue can be extended to provide improved operations. In addition, a NB auxiliary lane can be developed between Woodbury Avenue and River Road to provide a better merging and weaving condition for traffic entering the Turnpike from Woodbury Avenue and for traffic exiting at River Road. In addition, access from Woodbury Avenue to Shattuck Way/River Road via the River Road/Patterson Lane connection could be restricted to emergency vehicles only to preclude NB traffic from diverting to River Road in an attempt to bypass Turnpike traffic and rejoin the Turnpike at Exit 4. The NB auxiliary lane will be included as part of the Interim Safety Project

While reducing the level of traffic turbulence and improving the safety of current traffic operations on both sides of the bridges, Frank reminded all that the basic capacity constraints of the bridges and Turnpike would remain.

Frank then reviewed the Transportation Demand Management (TDM) strategies that have been considered to reduce the overall travel demand within the corridor including rail, bus, park and ride facilities, high occupancy vehicle (HOV) lanes and employer-based measures. He noted that the project team had met with transit operators and regional planning staff in developing these alternatives.

From a rail perspective, expansion of the Downeaster service by adding a fifth round trip to run southbound during the AM peak period and northbound during the PM peak period is being considered. [Current daily service includes four (4) round trips between Portland and Boston, with stops at Dover, Exeter and Durham. However, current service does not stop in Dover, Exeter and Durham during weekday peak commuter periods.] This additional peak period train set would run either between Boston and Dover, or Boston through Dover to Rochester, and include a new layover facility in Dover. A second rail alternative involves the inactive Pease Spur rail right-of-way (R.O.W.) in Newington which runs from the industrial area (the Newington Branch Line), across the Turnpike to the Pease Tradeport. The rail R.O.W. is at-grade and was active in the late 1950's and 1960's when Pease was a military base. Frank noted that all of the Newington roadway alternatives maintain a grade-separated R.O.W. corridor for possible future restoration of this rail service.

Frank then discussed three (3) bus alternatives that are under consideration. C & J Trailways currently operates a coach service between Dover and Boston via Portsmouth. This service could be expanded by adding coaches and extending the service area to Rochester. COAST plans to operate new express service between Rochester and Portsmouth along the Turnpike. This service is being funded through a CMAQ grant and is scheduled to begin in 2006. He noted that the express service could be further enhanced by adding buses to reduce headways and by adding Park and Ride facilities at Exit 9 in Dover and at Exit 12 in Rochester. The park and ride facilities would allow commuters a place to transfer between their private vehicles and the bus service, as well as support ride sharing and van-pooling.

Wildcat Transit and COAST [specifically COAST Route #2 (Rochester-Portsmouth), Wildcat Route #4 (Dover-Portsmouth) and COAST's Tradeport Trolley] operate local bus routes in the study area. These services could be enhanced by adding buses to reduce headways and by providing an interconnection/transfer point at Exit 1 which would allow riders to transfer among the local bus operators. In addition, a new Park and Ride facility could be constructed at the intersection of Route 108 and US 4 in Durham, which would support the Wildcat #4 route, encourage ride sharing and van-pooling and allow the capture of some traffic that would otherwise go to or from the UNH campus. Since there is some overlap among the three bus alternatives, consideration is being given to bundling the three alternatives together which would reduce overall costs, improve system efficiency and maximize ridership.

Frank next referred to 6-lane, 7-lane, and 8-lane HOV (high occupancy vehicle) alternatives that were evaluated, in comparison to the standard 8-lane (4 NB and 4 SB) roadway and bridge cross section, to potentially reduce the scale and impact of future roadway and bridge infrastructure improvements. He noted that four lanes of travel in each direction, combined with expanded transit service and employer-based actions – such as ride sharing and flexible work hours – are required to meet future 2025 travel demands. Given the need for a minimum of three lanes in each direction during summer weekends, the 6-lane concept – with two lanes northbound and southbound and two (2) reversible center lanes – is infeasible. Given the compactness of the study area (relatively short distance between Exits 3 and 6), HOV ridership estimates of barely 50 percent of the minimum volume necessary to justify an HOV lane, and cross-section widths that are greater than the standard 8-lane roadway section, both the 7-lane (single HOV contra-flow lane) and 8-lane concurrent HOV lane alternatives were also deemed infeasible and dropped from further consideration.

Frank reviewed employer-based TDM strategies which could include transit subsidies, ride-sharing, vanpools, alternative work schedules, bicycle and pedestrian facilities, on-site amenities (day care, showers, bicycle storage racks, etc.) and a guaranteed ride home program. He noted that these programs are usually promoted and coordinated with employers through a Transportation Management Association (TMA).

He then described the Little Bay Bridge alternatives which include rehabilitation and widening of the Little Bay Bridges (LBB) with the General Sullivan Bridge (GSB) rehabilitated, rehabilitation and widening of the LBB with the GSB removed, and replacement of the LBB with the GSB removed. All of the alternatives (either 6 or 8 lanes) would build to the west of the existing bridges to minimize the impacts on Hilton Park and the shoreline at Bloody Point. Frank then proceeded to discuss the profile of the Little Bay Bridges in the context of design criteria. He referred to a graphic depicting the existing profile of the LBB which corresponds to a 60 MPH design speed, and a 70 MPH design speed profile overlayed on the existing (60 MPH) profile. He noted that the 70 MPH profile provided slightly more stopping sight distance for the driver, and that the grades on the bridge would be approximately 3.3 percent in comparison to the 3.5 percent grades on the existing profile. He stressed that the driver's sight distance associated with 60 MPH is not a safety deficiency, in comparison to the

narrow shoulders (2'-0" to 2'-3") on the existing bridges which are safety deficiencies. He noted that the 60 MPH design speed is 10 MPH greater than the 50 MPH posted speed for the bridges and study area, and that the 50 MPH posted speed was appropriate for the study area. The Turnpike study area is in a zone of transition where abutting land use is developed, interchange spacing is close, and there are relatively high volumes of traffic entering and exiting the Turnpike and changing lanes. Under these conditions, drivers expect reduced speeds, similar to comparable sections of urban roadways such as I-93 through Manchester and Concord, I-293 in Manchester and I-95 in Portsmouth and Kittery, Maine. The Little Bay Bridge rehabilitation/widening alternatives maintain the 60 MPH design speed profile, address the substandard shoulder deficiencies, improve the traffic weaving conditions which are prevalent on the existing approaches to the bridges, increase capacity on the Turnpike and bridges and have significantly less impacts to Hilton Park and property owners than the Little Bay Bridge replacement and GSB removal alternative to the west of the existing LBB that provide a 70 MPH design speed. Frank noted that under current PM peak hour conditions, traffic flows freely northbound across the bridge, which is constrained by the narrow shoulders and density of traffic, yet, at the same time, traffic congestion and long delays are prevalent from Exit 1 north to the bridge approach. This congestion and delay are due, not to the profile of the bridge, but to the lack of auxiliary lanes to accommodate traffic entering, exiting and changing lanes.

Frank then proceeded to describe the roadway alternatives. In Dover, Alternatives 2 and 3 were very similar – both eliminated Exit 5, converted the overpass at Exit 6 to 2-way operation, reconfigured the Exit 6W off-ramp from a loop to a signalized diamond-type design, added the missing northbound on-ramp, and provided a grade-separated Hilton Park connector (under the Turnpike). Alternative 3 differed in that a grade-separated local connector is provided under US 4 connecting Spur Road with Boston Harbor Road, thus eliminating the need for a traffic signal at the Spur Road/US 4/Boston Harbor Road intersection. [With the local connector, turning movements at this intersection can be restricted to right turns.] In Newington, Alternatives 10, 11 and 12 combine Exits 3 and 4 in the southbound direction via a local traffic connector from Nimble Hill Road to a reconfigured Exit 3 at Woodbury Avenue, industrial traffic access to Exit 3 and the Turnpike is improved, a secondary access connection to the Tradeport is provided to Exit 3, and the existing rail spur right-of-way connecting the Newington Branch to the Tradeport is preserved, in grade-separated fashion, in the event that future rail operations become viable following Turnpike reconstruction. Alternative 10 locates the industrial traffic connector and the rail right-of-way along the existing rail R.O.W. Alternatives 11 and 12 locate the grade-separated industrial traffic connector and rail R.O.W. paralleling Patterson Lane at Exit 3. Both Alternatives 10 and 11 provide a diamond-type interchange at Woodbury Avenue (Exit 3). Alternative 12 is very similar to Alternative 11 except that the southbound on-ramp from Woodbury Avenue is reconfigured from a diamond-type layout (Alternative 11) to a loop ramp (Alternative 12). Frank noted that the cross-section of Woodbury Avenue under any of the alternatives would be limited to two lanes in each direction, separated by a median, with shoulders and sidewalk panels on each side, and would not substantially impact the Isaac Dow House or the Beane Farm building, both historic resources.

Frank then explained that feedback from the ATF and others, coupled with further engineering study, have resulted in recent modifications to Alternatives 10 and 12 in Newington and Alternatives 2 and 3 in Dover. He proceeded to describe the most recent modifications to Alternative 10, noting that the mainline of the Turnpike had been shifted approximately 80' to the west in order to simplify the construction of the Woodbury Avenue overpass and improve traffic management during construction; the Exit 3 SB on-ramp had been converted from a diamond-type configuration to a loop ramp in order to maximize traffic weaving distance between the Exit 3 on-ramp and the Exit 1 off-ramp; the elevation of the grade-separated railroad R.O.W. and industrial traffic connector to Exit 3 had been lowered by approximately 8 feet which lowered the mainline profile of the Turnpike; and that the limits of slope impacts had been calculated and

depicted on the plan. He referred to these revisions as Alternative 10A. Frank then reviewed the lowered profile of Alternative 10A.

Frank then described refinements to Alternative 12 noting similarities to Alternative 10A such as the slight horizontal shift in alignment to the west to improve constructability and traffic management at Exit 3, and the depiction of the limits of slope impacts due to construction. He also noted that the grade-separated railroad R.O.W. and industrial traffic connector to Exit 3 had been shifted approximately 900 feet to the north to improve the constructability of the Exit 3 interchange and to avoid an existing utility corridor paralleling Patterson Lane, and that the roadway connector to the Tradeport had been realigned to avoid the potential prime wetland area located west of Railway Brook. Frank referred to these modifications as Alternative 12A, and reviewed the mainline Turnpike profile of Alternative 12A, noting that the elevation of the grade-separated railroad R.O.W. and industrial traffic connector had been lowered in Alternative 12A, in similar fashion to Alternative 10A. He noted that the Turnpike, under Alternative 12A, would be approximately 18'-20' above the elevation of the existing NB barrel of the Turnpike at the point where the railroad R.O.W. and industrial traffic connector passed under the Turnpike.

With respect to Alternatives 2 and 3 in Dover, Frank stated that the only refinements pertain to the identification of the limits of potential slope impacts due to construction, and that the Boston Harbor Road/Spur Road intersection had been relocated approximately 150' to the east to increase vehicle storage lanes (Alternative 2) and transition areas for the westbound lane drop on US 4, prior to the Scammell Bridge. He also reviewed the Turnpike's profile between the Little Bay Bridges and Exit 6. He noted that the Hilton Park Connector was located approximately 1,200' north of the bridges, where the Turnpike would be approximately 18' above the existing elevation of the Turnpike to provide clearance for the Hilton Park Connector below. An alternative location for the connector had been considered adjacent to the channel, but Frank explained that potential impacts to parkland, flood plain issues, and additional cost ($5.5 M) deemed this location infeasible in comparison to the northerly alternative.

At this point, Frank paused to introduce Tom Wholley from VHB who is directing the noise impact analysis. Prior to Tom's summary of the preliminary noise impact analysis, there were several questions and comments pertaining to the roadway alternatives that had just been described. Matt Mayberry, Dover City Councilor, stated that it appeared to him that the Newington alternatives were being driven by economic development. Frank responded that, to the contrary, the local roadway connections, as proposed, would improve transportation efficiency and safety within the study area, the access to the Tradeport from Exit 3 would extend the service life of Exit 1 and improve area traffic operations, and planning to accommodate the future movement of goods into the Tradeport could potentially reduce the volume of heavy commercial vehicles on the Turnpike in the future. All of these concepts are directly related to the project's purpose and need. Frank did, however, acknowledge that the local roadway connectors could also provide access to future land development. Ray Bardwell, 199 Spur Road, Dover, questioned the operation of the proposed northbound signalized diamond-type interchange at Exit 6, in comparison to the existing loop ramp configuration for westbound exiting traffic bound for US 4. Frank responded that the signalized diamond interchange, which provides double left turn lanes, would operate at a satisfactory level of service, and that the queuing of off-ramp vehicles would be contained on the off-ramp and not spill back onto the Turnpike. Future traffic volumes require a 2-lane loop ramp [under the loop ramp alternative] which raises safety and operational issues. Frank added that the 2-lane loop ramp alternative would also add approximately $2M in bridge costs. Given the traffic operations adequacy of the signalized diamond proposal, and in light of the safety concerns and additional cost associated with the 2-lane loop ramp alternative, the project team believes that the signalized diamond interchange is the better alternative. Frank also mentioned that the signal operations at the northbound ramps

would provide gaps in the traffic stream along the overpass which would make it easier to exit Spur Road and enter and exit Dover Point Road in the absence of traffic signals at these locations. A final question was asked by Jack Pare, Newington Planning Board, as to the elevation of the Turnpike as it traverses over the proposed industrial traffic connector/railroad R.O.W. as depicted in Alternatives 10A and 12A. Would the elevation of the Turnpike be similar to the Turnpike as it passes over Exit 1 at Pease Boulevard/Gosling Road? Frank suggested that it would be similar – approximately 20' to 21' – and stated that he would check on the actual elevation/profile at Exit 1.

Frank next requested that further questions be held until after Tom Wholly presented a brief summary of the preliminary noise analysis that is currently under way. Tom began by reviewing the elements of noise – loudness, frequency and duration – noting that noise travels in a straight line, noise measurements in decibels are logarithmic in nature, and noise is subject to individual perceptions. He reviewed the NEPA process which includes determining existing noise levels, calculating future sound levels, determining noise impacts and evaluating noise mitigation where required. Tom also described FHWA's noise model and the factors – roadway geometry, traffic volumes and traffic speeds – calibration and calculations associated with the model. He noted noise abatement criteria, e.g. 67 dBA for residences, and stated that an increase of 15 dBA or more is considered a substantial noise increase. Tom also reviewed the criteria to evaluate noise mitigation measures; such criteria include: engineering, safety, acoustic performance, cost-effectiveness, development vs. highway timing, land use and views of impacted receptors (i.e. residents' opinions of the proposed mitigation). Tom then referred to a graphic which depicted noise impact areas within the study area. He identified three (3) areas in Newington and five (5) areas in Dover where existing sound levels exceed the noise abatement criteria. Construction of the Turnpike improvements – assuming 8-lanes under Alternatives 10A (Newington) and 3 (Dover), noise levels in the aforementioned areas would increase, at 2025 traffic volume levels, in the range of 1 to 4 dBA, depending on location. He explained that the project related impacts are considerably less than the NHDOT 15 dBA threshold for identifying a substantial noise increase, and that no new areas are created where sound levels exceed the noise criteria. In other words, the areas where existing sound levels exceed the noise criteria are the same areas in 2025 after the Turnpike is improved where sound levels exceed noise criteria. The increase in noise in these areas, due to the improvement project, ranges between 1 and 4 dBA. Tom concluded his presentation by stating that the NHDOT has no responsibility to mitigate existing noise conditions, but since the project is impacting the existing areas, these areas will be evaluated for mitigation.

A number of questions followed Tom's presentation. Gale Pare, 188 Little Bay Road, Newington, asked if the noise modeling and analysis of future conditions took into account the elimination of trees currently located in the median of the Turnpike. Tom responded in the affirmative, stating that the analysis is a worst-case condition. Matt Mayberry, Dover City Council, asked if the noise analysis extended beyond the Dover toll plaza. Tom referred to the plan depicting the noise impact areas and stated that the analysis included Area 13 located to the west of the toll plaza, and Area 14 located to the east of the toll plaza. Ray Bardwell, 199 Spur Road, asked if Tom was aware of any legislation that would prohibit truckers from applying jake brakes under certain circumstances. Tom replied that he was unaware of such legislation. Ray asked if the noise analysis was conducted during a noisy time of day as opposed to a quiet time of day. Tom stated that the analysis reflects the noisiest hour. He noted that noisy automobiles and motorcycles were considered as trucks as part of developing a worst-case analysis condition.

Jack Pare inquired about FAA noise models. Tom responded that the FAA utilizes specialized models to measure noise. These models include tree zones, and Tom pointed out that for tree zones to be effective at mitigating noise, wooded areas need to be at least 300' deep and full grown.

A resident asked a final question as to where project mitigation will be focused. Tom again referred to the aforementioned areas – Nos. 1, 4 and 5 in Newington and 7, 8, 9, 11 and 13 in Dover – as depicted on the plan of noise-impacted areas. Chris Waszczuk concluded the discussion of the preliminary noise impact analysis by stating that the final results of the noise impact analysis and recommendations for mitigation will be presented at the next round of Public Informational Meetings in the fall of this year.

Frank O'Callaghan then summarized and reviewed the status of 8 and 6-lane combination options. He noted that only two (2) 8-lane options remain, both of which entail rehabilitation and widening of the Little Bay Bridges (LBB) combined with expanded transit service and employer-based TDM actions. The only difference between these two options is whether or not the General Sullivan Bridge (GSB) is rehabilitated (Option 3) or removed (Option 2). The other three (3) 8-lane options were eliminated from further consideration by the ATF for a number of factors: lack of transit alternatives, and TDM actions (Options 1 and 4); and higher cost, the issue of prudency concerning adversely impacting historic resources, greater property and environmental impact, and lack of need to improve the profile of the bridge (Option 5).

Of the 6-lane options, only Option 6 remains which entails the rehabilitation/widening of the LBB, rehabilitation of the GSB, expanded transit service and employer-based TDM actions. Frank noted, unfortunately, that this 6-lane option will not meet the 2025 travel demand, with system breakdown projected to occur around 2017. Of the other four (4) 6-lane options, Options 7 and 8 were HOV-lane alternatives which were not supported by the ATF, and were characterized by insufficient ridership to justify the HOV lane, and cross sections that were wider than the standard 8-lane options. In an effort to increase capacity and minimize impacts, a borrow lane or zipper lane (Option 9) and peak hour shoulder use (Option 10) options were developed. Similar to Option 6, both the LBB and GSB would be rehabilitated and combined with expanded transit service and employer-based TDM actions. In contrast to Option 6, both Options 9 and 10 provide four (4) travel lanes in the peak direction during the peak hour of traffic. Peak shoulder use (Option 10) has the advantage over the borrow lane concept of having lower operating and maintenance cost. However, Frank noted that FHWA has reservations about both options from a safety perspective and will not support either option as a long-term solution. As such, there are only three options remaining under consideration: the two (2) 8-lane options both of which entail rehabilitation and widening of the LBB combined with expanded transit service and employer-based TDM actions. One of these options (Option 3) rehabilitates the GSB, the other (Option 2) removes the GSB and provides a multi-use pathway on the rehabilitated LBB. The third of the remaining options is the standard 6-lane option (Option 6) of rehabilitating/widening of the LBB and rehabilitation of the GSB combined with expanded transit service and employer-based TDM actions.

Frank compared the cross-section widths of 6-lane and 8-lane typical roadway sections noting that the 6-lane cross section was approximately 118'-122' in width, in comparison to the 142'-146' width of the 8-lane cross section – the difference being approximately 24'. He observed that the existing cross section of the Turnpike varied, and noted that the existing width of the Turnpike in the vicinity of Exit 5 at Hilton Park is approximately 100'. To assist in visualizing the relative scale of both 6 and 8-lane options, Frank referred to an aerial rendering of the Little Bay Bridges and General Sullivan Bridge. The first rendering depicted a 6-lane LBB widened to the west side, followed by a depiction of an 8-lane bridge widened also to the west side. Under the 6-lane widening, the distance between LBB and GSB is approximately 39'; the 8-lane option reduces the separation between bridges to approximately 15'; the 24' difference being the width of the two additional lanes. As a further comparison between 6-lane and 8-lane options, Frank referred to a table summarizing the preliminary wetland impacts associated with 6 and 8-lane options under different roadway alternatives. It was apparent from the summary table that there is not a substantial difference in wetland impacts when comparing 6-lane and 8-lane options. For example, assuming Alternatives 10A in Newington and 3 in Dover, the total difference in wetland

impacts between 6-lane and 8-lanes ranged from approximately 0.10 Ac (Alternative 10A) to 0.38 Ac (Alternative 3). Frank noted that similar comparative impact analysis for other resources is currently underway.

Frank concluded the presentation with a couple of brief computer model simulations of 2025 peak hour traffic flow conditions along the Turnpike between Exits 3 and 6 under both 6 and 8-lane options. This comparison clearly demonstrated the need for an auxiliary lane in each direction, in addition to three through lanes in each direction, to be carried between Exits 3 and 6 to manage the volume of traffic that enters and exits the Turnpike and changes lanes between these exits. These operations are critical southbound in the 2025 AM peak hour, and northbound in the 2025 PM peak hour. Under the 6-lane option, the auxiliary/traffic management lanes are provided only at the interchanges for decelerating (exiting) and accelerating (entering) traffic. Under the 8-lane option, the auxiliary/traffic management lanes at each interchange are extended across the bridges to connect with each other. The difference in traffic flow and congestion is dramatic and dependent on whether or not the auxiliary/traffic management lane is extended across the bridge. Frank also referred to a simulation that compared the northbound Exit 6 off-ramp 2025 PM peak hour operations under both the proposed signalized – diamond configuration and the 2-lane loop ramp alternative. As he had described previously, the diamond interchange off-ramp operations will be satisfactory and the queuing of off-ramp vehicles will be contained to the off-ramp. The 2-lane loop ramp raises safety issues and involves additional bridge related costs ($2M). Frank concluded the review of traffic simulations by focusing on 2025 northbound PM peak hour operations at the Dover Toll plaza. Assuming implementation of the EZ Pass system, he compared operations under both the diamond and 2-lane loop ramp alternatives. Operations under the signalized diamond interchange alternative are satisfactory. However, due to the shorter distance of 4-lane storage between the Toll Plaza and the northbound on-ramp under the 2-lane loop ramp alternative in comparison to the signalized diamond alternative, vehicle queuing under the 2-lane loop ramp is significantly greater and will block the northbound entrance ramp to the Turnpike.

At this point, a third question and comment period commenced. Jack Pare noted the strong currents which currently flow through the channel affecting navigation and causing scour on the bridge piers. Assuming the widening of the bridges and piers, he inquired as to the potential effect on currents and the current's effect on the new piers. Chris Waszczuk replied that the new piers of the Little Bay Bridges might be connected to the rehabilitated piers of the General Sullivan Bridge – assuming that the GSB is rehabilitated – and that the existing level of turbulence within the bridge channel may be reduced. Chris noted that UNH is currently completing a hydrodynamic analysis modeling these potential surface and subsurface impacts. In response to a question on traffic management during construction, Chris responded that construction would be phased, and that two lanes of traffic in each direction would be maintained at all times. Ray Bardwell stated that he liked the Hilton Park Connector, as proposed, but still favored the 2-lane loop ramp at Exit 6 over the proposed signalized diamond interchange as proposed. Frank O'Callaghan responded that traffic operations, safety, and cost favored the signalized-diamond interchange.

David Walker, Rockingham Planning Commission, asked if the River Road northbound interchange could be eliminated. Frank responded that the northbound off-ramp and on-ramp at River Road function in tandem with the northbound off and on-ramps at Exit 3 (Woodbury Avenue). The distribution of traffic between these two interchanges, combined with the spacing of interchanges and addition of the 4th northbound lane as an extension of the Woodbury Avenue on-ramp, combine to provide satisfactory traffic operations at each interchange, and allow the cross section of Woodbury Avenue to be minimized. This avoids a substantial impact on both the Isaac Dow House and the Beane Farm.

Sarah Salisbury, 430 Dover Point Road, Dover, noted that the garage at 430 Dover Point Road, which abuts the Turnpike, as indicated on the conceptual improvement plans, represents her business, K9 Kaos, a dog day and extended stay care center. Frank O'Callaghan noted and thanked Sarah for the updated information; he suggested that the oversight resulted from the base mapping being completed prior to the start-up of the business. Sarah concurred.

A Newington resident, in reference to the previous question about the feasibility of closing the northbound River Road off and on-ramps, stated that such action would be a waste of money in light of the imminent construction of the Interim Safety Improvements in Newington. Ray Bardwell asked if the demolition material from the construction of the Turnpike would be suitable material for either constructing a jetty or expanding the parking area at Hilton Park. Chris Waszczuk replied that NHDOT will continue to coordinate with NHF&GD to improve the park. The feasibility of reusing rubble from the reconstruction of the Turnpike will be explored. Gale Pare inquired as to the degree of pavement removal, e.g. base and/or subbase materials, where sections of existing highway are planned to be discontinued once the project is constructed. Chris responded that, at a minimum, the pavement would be removed, and that plans for removing the base or subbase material would be developed within the context of the need for wetland mitigation and creation. David Walker, Rockingham Planning Commission, noting the FHWA's reservation concerning the zipper lane concept, asked whether or not there was a practical 6-lane alternative that met forecast travel demands. Frank responded that there were no practical 6-lane alternatives which, combined with expanded transit service and employer-based TDM actions, met the 2025 travel demands. The HOV alternatives, both contra-flow and concurrent flow concepts, resulted in wider cross sections than the 8-lane cross section and did not generate enough ridership potential to justify their use. As stated previously, FHWA will not support a zipper lane or peak hour shoulder use as a long-term solution.

There being no further questions or comments, Chris Waszczuk thanked all for attending the meeting and providing input.

The meeting ended at 9:45 PM.

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING (PIM) MEETING
DOVER CITY HALL
MAY 18, 2005

Name Steven Stancel
Affiliation Dover Planning Department
Address Dover City Hall
288 Central Ave
Dover N.H 03820

Phone /Email 516-6008 / S.Stancel@ci.dover.nh.us

Name Christopher Parker
Affiliation Dover Planning Dept.
Address 288 ~~Central~~ Central Ave
Dover, NH 03820

Phone /Email 516-6008 / c.parker@ci.dover.nh.us

Name Matt Mayberry
Affiliation Dover City Council
Address 410 Dover Pt Rd
Dover NH 03820

Phone /Email 516 0130 / Mattc dover-remax.com

Name Tim Roache
Affiliation SRPC
Address

Phone /Email / TROACHE@STRAFFORD.ORG

Name Evelyn Sanborn
Affiliation Homeowner
Address 316A Dover Pt Rd

Phone /Email 749 4460 / ESANBORN1 @Comcast.net

Name David Walker
Affiliation Rockingham Planning Comm.
Address

Phone /Email 778-0885 / dwalker@rpc-nh.org

Name Bill Cass
Affiliation NHDOT
Address

Phone /Email /

Name Velva Bittner
Affiliation Homeowner
Address 354 Dover Pt Rd.

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING (PIM) MEETING
DOVER CITY HALL
MAY 18, 2005

Name RICK HEBBARD
Affiliation
Address 99 SPRUCE LANE
DOVER NH

Phone /Email 742-0925

Name Bill Hobbinstine
Affiliation
Address

Phone /Email 617 492 8330 /

Name James Garvin
Affiliation NH Division of Historical Res
Address 19 Pillsbury St.
Concord NH 03301

Phone /Email 271-6436 / james.garvine dcr.nh.gov

Name MARC LAURIN
Affiliation NHDOT
Address

Phone /Email /

Name Richard Doucette
Affiliation Federal Aviation Administration
Address 12 New England Exec. Park
Burlington MA 01803

Phone /Email 781-238-7613

Name MIKE DUGAS
Affiliation NHDOT
Address

Phone /Email /

Name William F. O'Donnell
Affiliation FAA Hwy Assist
Address 10 Commerce Dr - Suite 2
Concord NH 03301

Phone /Email (603) 228 3057 x191

Name Edward Wolford
Affiliation FHWA
Address
12 11
19 Chandler Dr Std
Concord NH 03301

Phone /Email Edward.Wolford@FHWA.DOT.GOV

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING (PIM) MEETING
DOVER CITY HALL
MAY 18, 2005

Name SARAH SALISBURY
Affiliation K9 KAOS
Address 430 DOVER PT RD
DOVER NH 03820

Phone /Email INFO@K9KAOS.com

Name DAVID FUNK
Affiliation
Address 43 BOSTON HARBOR ROAD
DOVER

Phone /Email /

Name Brian Dubreuil
Affiliation FastDogs Realty, LLC
Address 430 Dover Point Rd
Dover NH 03820

Phone /Email 603 742 0136 / qksand@comcast.net

Name REP WM KNOWLES
Affiliation STATE LEGIS
Address 12 WELLINGTON AVE
DOVER

Phone /Email 742 5681 /

Name ANNE Buckley
Affiliation Fastdogs Realty + K9KAOS
Address 430 Dover Point Rd
DOVER NH 03820

anne@k9kaos.com
Phone /Email 743-3647 /

Name RAYMOND BERRUEZ
Affiliation
Address 199 SAWYER ROAD
DOVER, NH 03820

Phone /Email /

Name AARON NICHOLS
Affiliation
Address 23 BROWNING DR.
DOVER, NH 03820

Phone /Email 603-740-6416 / aaron@fwappo.com

Name PETER J. WALKER
Affiliation VHB - Consulting Firm
Address Kilton Rd
Bedford

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING (PIM) MEETING
DOVER CITY HALL
MAY 18, 2005

Name Douglas DeCarter
Affiliation NH DOT Dist 6
Address Durham
Phone /Email 603 868 1133 /

Name
Affiliation
Address
Phone /Email /

Name Jack Pare
Affiliation Newington Pln Bd
Address 188 Little Bay Rd
Newington, NH
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name Gail Pare
Affiliation Newington HDC
Address 188 Little Bay Rd
Newington, NH 03801
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name Peter Britz
Affiliation City of Portsmouth
Address 1 Junkins avenue - Portsmouth
Phone /Email plbritz@ch.cityofportsmouth.com /

Name
Affiliation
Address
Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING (PIM) MEETING
DOVER CITY HALL
MAY 18, 2005

Name Nora Kelley
Affiliation _____
Address 348 Dover Pt Rd
Dover NH 03820
_____
_____
Phone /Email nkelley@tiac.net

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email _____/_____

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING (PIM) MEETING
DOVER CITY HALL
MAY 18, 2005

Name Tom Fargo
Affiliation SRPC - Chairman
Address _____
_____
_____
_____
Phone /Email _____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email_____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email_____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email_____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email_____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email_____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email_____/_____

Name _____
Affiliation _____
Address _____
_____
_____
_____
Phone /Email_____/_____

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Steve Ireland, NHDOT
Ed Woolford, FHWA
Bill O'Donnell, FHWA
Pete Walker, VHB
Tom Wholley, VHB
Frank O'Callaghan, VHB

Date/Time: May 19, 2005

Project No.: 51425

Place: Newington Town Hall

Re: Public Information Meeting
Newington-Dover, 11238

Notes taken by: Frank O'Callaghan

Chris Waszczuk, NHDOT Project Manager, called the meeting to order at 7:06 PM. He welcomed those in attendance, requested those in attendance to sign in, and introduced the project team: Mike Dugas, Marc Laurin, Steve Ireland from the NHDOT, Bill O'Donnell and Ed Woolford from FHWA, and Frank O'Callaghan, Pete Walker and Tom Wholley from VHB. He reviewed the meeting agenda, noting that the project team was looking for input, and that there were three (3) scheduled breaks in the presentation of material for public comment and questions. He added that there were currently several alternatives under consideration in both Dover and Newington, and that public input is important to the decision-making process.

Chris reviewed the project's purpose which is to reduce safety problems and improve transportation efficiency for an approximately 3.5 mile long section of the Spaulding Turnpike beginning at the Gosling Road Interchange in Newington and extending across the Little Bay Bridges to a point just south of the toll plaza in Dover. Chris then reviewed the project need citing the importance of the Spaulding Turnpike from commuter, commerce, and tourist perspectives; its designation as part of the National Highway System (NHS); and its function as a limited access highway linking the seacoast region with I-95, Concord, the Lakes Region and the White Mountains. He cited the historic growth of traffic and future projections, the poor levels of traffic service, existing geometric constraints and deficiencies and the history of traffic accident experience. He noted that the compactness of the 3.5 mile study area and short spacing between the six (6) interchanges within this section of the Turnpike constrain traffic operations, and exacerbate the impacts of a traffic accident, given the lack of suitable alternate routes to the Turnpike. Chris also noted that the Turnpike bisects local residential, recreational and commercial areas, and that there exists a need for local connectivity of motorists, pedestrians and bicyclists between the east and west sides of the Turnpike in both Newington and Dover. He stated that the Little Bay Bridges are major structures located on an important highway in a moderate seismic area and were not designed to meet the current seismic criteria for this region. He noted that the Newington-Dover Spaulding Turnpike project was included in the State's Ten-Year Transportation Improvement Program and was the highest long-

term transportation priority of the Seacoast Metropolitan Planning Organization. He stated that as the area continues to develop and traffic volumes increase, traffic operations and safety conditions would worsen. If nothing is done to improve the Turnpike, it is estimated that 2025 weekday periods of traffic congestion will lengthen to more than three times existing congested periods.

Chris then reviewed the five (5) phases of an Environmental Impact Statement (EIS) noting that the EIS is the highest order of study required by the National Environmental Policy Act (NEPA). The project Scoping Report, published in March 2004, summarizes the Phase 1 activities, which included the project's purpose and need statement, inventories of environmental resources, analysis of existing traffic conditions and projections of future travel demands, and the identification of the range of typical alternatives that would be considered. The Rationale Report, published in January 2005, and available on the project website, summarizes the development, screening and range of reasonable alternatives to be carried forward into Phase 3 of the study. Current Phase 3 activities include the detailed evaluation and impact analysis of alternatives, and the identification of a preferred alternative. He noted that there would be Public Information Meetings scheduled for the fall (2005) to discuss the preferred alternative. At the conclusion of Phase 3 in January 2006, a draft Environmental Impact Statement (DEIS) will be published. A joint FHWA/ACOE/NHDES/NHDOT Public Hearing (Phase 4) on the Preferred Alternative is targeted for April 2006. Phase 5, which is scheduled for September 2006 – June 2007, will focus on finalizing the EIS by responding to comments on the Draft EIS and comments from the Public Hearing. Assuming the availability of funding and procurement of the necessary approvals and permits, construction could begin as early as 2008.

Chris concluded his introductory remarks by noting the importance of public participation, and the openness of the process. He explained that a project Advisory Task Force – comprised of representatives of the municipalities of Newington, Dover, Portsmouth and Durham, the Rockingham and Strafford Regional Planning Commissions, COAST, the Pease Development Authority, the Great Bay Estuarine Research Reserve, and the Greater Dover and Portsmouth Chambers of Commerce, FHWA and NHDOT – has met 12 times during the course of the study and acts as a forum for communication, providing early and continuous input to the project team and feedback to their respective constituencies. In addition, Public Information Meetings are planned during each phase of the project in both Dover and Newington locations, and a project website, www.newington-dover.com, is maintained that provides a wealth of project related information such as reports, plans, meeting minutes, and frequently asked questions. The website is also another means of public input to the project team.

At this point, Chris paused and asked for questions or comments. There being none, he introduced Frank O'Callaghan to review the project background, Frank began by describing the project study area as extending north from Exit 1 (Gosling Road/Pease Boulevard) of the Turnpike on the south, traversing the Little Bay Bridges to a point just south of the Dover Toll Plaza, and bounded by the Piscataqua River on the east and Little Bay on the west. He noted many study area resources and issues such as marine habitat, navigation, water quality, tidal and surface wetlands, floodplains, ground water, hazardous materials, visual resources, park and recreational activities, historic and cultural resources and potential residential and commercial property impacts. He stated that air quality and noise were also relevant issues, and each is being currently analyzed in detail during Phase 3 (DEIS) of the study. He noted that his colleague, Tom Wholley, would present some preliminary findings on noise impacts later in the presentation. He also noted that direct and indirect and cumulative socio-economic impacts are also being currently identified and analyzed during the current phase (DEIS) of the study. He stated that the March 2004 Scoping Report summarized many of the inventories of environmental resources.

In summarizing safety conditions, Frank noted that study area traffic accidents during the 1997-2001 period (908 total) increased by approximately 58 percent in comparison to the previous 5-year, 1992-1996, period (575 total). During the 1997-2001period, accidents increased at approximately 11 percent per year in comparison to the average annual traffic volume growth of 3 percent per year. He also reviewed traffic volume growth where average daily traffic (ADT) volume has increased from approximately 30,000 vehicles in 1980, to over 70,000 in 2003, and is projected to grow to over 94,000 vehicles per day by the year 2025. He noted that current weekday peak hour capacity constraints extended from Exit 6 southbound to Exit 3 (Woodbury Avenue) in the morning, and from Exit 3 northbound through Exit 6 in the evening. These capacity conditions are compounded by a number of geometric deficiencies including substandard shoulder width on the Little Bay Bridges, substandard turning radii at many of the interchange on and off ramps, and inadequate weaving distances in both the northbound (River Road) and southbound (Nimble Hill Road) Exit 4N - Exit 4 area. As traffic volumes grow, the safety and traffic operational conditions, which are currently constrained, will worsen. For example, if the Turnpike is not improved, current weekday peak hour periods of congestion will double in the morning and more than triple in the evening by 2025.

Frank O'Callaghan then presented some general bridge information for both the Little Bay Bridges and the General Sullivan Bridge. He noted the length, width, main navigation span and vertical clearance of each bridge. The Little Bay Bridges are characterized by substandard shoulder widths and a 3.5 percent grade which restricts driver sight distance to a 60 mph design speed (design speed being the maximum safe operating speed governed by the vertical alignment or profile). The 2-lane bridges have minor deterioration and the substructure for both bridges – composed of reinforced concrete – was designed and constructed in 1966 prior to the current, more stringent seismic resistance requirements. Frank then enumerated several factors which would affect the rehabilitation alternatives for the General Sullivan Bridge. A 4 percent grade limits driver sight distance to a 45 mph design speed. The cross-section is limited to 24' of pavement and 2'-11" sidewalks on each side. In addition, the deck, girders and truss members exhibit major deterioration, and there is extensive substructure deterioration. The General Sullivan Bridge is also historic – being the second highest-ranking historic bridge in the state -- and subject to costly lead paint removal and re-painting.

At this point Frank paused for questions and comments. An attendee asked, with respect to the General Sullivan Bridge (GSB), the definition of historic structure. Chris Waszczuk replied that allstructures, 50 years of age or older, are evaluated as to their historic significance. He stated that the state Division of Historic Resources has noted the significance of the structure and has recommended preservation in place. Chris noted that the NHDOT is obligated to take DHR's findings and recommendations into consideration, and stated that rehabilitation and widening alternatives for the Little Bay Bridges have been developed both with the rehabilitation of the GSB and with the GSB removed. Bill O'Donnell, FHWA, added that to remove the GSB, it must be demonstrated that there is no practical and prudent alternative to the removal. Another attendee stated that it wasridiculous to preserve the GSB, stating that the bridge is an eyesore and should be removed. Gail Pare, 188 Little Bay Road, Newington, asked if any thought had been given to using the GSB for local traffic. Chris Waszczuk responded that a proposal to use the bridge for transit vehicles only during the construction of the Little Bay Bridges has been discussed. Frank O'Callaghan added that Dover ATF representatives are opposed to local traffic use fearing the impact of local traffic on the Dover Point Road/Boston Harbor Road area.

Dave Sweet asked if the state was tracking the falling of debris from the GSB given the high level of boating activity in the channel below. Chris replied that there is no such tracking; he noted, however, that if rehabilitated, the bridge would not be an eyesore. He added that the cost of rehabilitation ranged from $19M to $22M depending on the design load. Given the cost to remove the bridge ($5M) and the added cost to provide a substitute multi-use path as part of the LBB rehabilitation/widening ($6M), the net cost of the GSB rehabilitation would be approximately $10M. Chris added that the prudence of spending this additional $10M has yet to

be determined. Edna Mosher, 97 Nimble Hill Road, Newington, stated that she loves the GSB, and walks over it several times a week. She noted that the bridge is used regularly by bicyclists and for recreation. Chris acknowledged that a 16' wide multi-use path adjacent to the Little Bay Bridges would not be as pleasurable a crossing for bicyclists and pedestrians who currently traverse the GSB. He added that the NHDOT has rehabilitated and repaired several truss structures to be visually appealing bridges. Chris Nash, 382 Blackwater Road, Dover asked how much traffic on the Turnpike is the result of the Tradeport. Frank O'Callaghan estimated that current traffic contribution is approximately 15 percent and that future traffic volumes may be approximately 20% related to the Tradeport. Gail Pare asked if peak traffic generating events at UNH are reflected in future traffic projections. Frank responded that the seacoast regional travel demand model is a daily model with weekday peak hour volume estimates. UNH related traffic that occurs during the morning and evening commuter periods is reflected in the peak hour volume estimates. Mr. Nash asked what impact the potential closing of the Portsmouth Naval Shipyard might have on traffic volumes. Frank replied that approximately 60 to 65 percent of shipyard traffic is from Maine along the I-95 corridor and as such, does not impact the Turnpike. He also noted that the shipyard work shifts tend to not coincide with the peak commuter periods along the Turnpike. As such, the shipyard traffic probably has a very minor impact on the Turnpike traffic operations. A final comment pertained to Alternative 3 in Dover; a resident questioned the proposed elimination of the traffic signal at the Spur Road/US 4 intersection, suggesting that accidents at the intersection may increase if the signal is removed. Frank replied that the nature of the accidents would have to be reviewed. For example, if the accidents are of a rear end nature, elimination of the signal may reduce that type of accident. The elimination of left turns will also reduce accidents related to those maneuvers.

At this point, there being no further questions or comments, Frank next proceeded to review the alternatives that have been carried forward for further study. In addition to the No-Build, Transportation System Management (TSM), Transportation Demand Management (TDM), Bridge Alternatives, Roadway Alternatives and combinations thereof have been progressed. With respect to TSM improvements, Frank noted that these improvements are generally low cost in nature and usually implemented within the existing right-of-way, or require minor right-of-way, to improve safety and/or increase traffic operating efficiency. Examples of TSM-type actions are adding turning lanes and/or increasing traffic control at intersections, or changing pavement markings or increasing regulatory or directional signage.

Within the study area, Frank noted that signage on the bridge approaches that reminds drivers to stay in their lane has already been upgraded, and directional signage for NB travelers connecting to US4 at Exit 6W are being upgraded as part of a current construction project. He then referred to conceptual graphics and described several TSM alternatives.

Dover TSM 1

This action involves the extension of the NB deceleration lane to the loop ramp leading to US 4 at Exit 6W. Restriping of the shoulder area under the overpass will extend the deceleration lane by approximately 400' without impacting the bridge abutment. This measure will prevent peak hour exiting traffic from backing up on the loop ramp onto the Turnpike and blocking NB through traffic on the Turnpike. *[Note: This was implemented in 6/2005.]*

Dover TSM 2

This action involves merging the 2-lane SB on-ramp at Exit 6 to a single lane prior to the merge with the main line, coupled with carrying two (2) through lanes on the Turnpike through the Exit 6 interchange to merge with the single SB on-ramp. Currently, the two (2) Turnpike through lanes merge to a single lane. The proposed changes will make it safer and easier for drivers to be in the

proper lanes (either inside or outside) when planning to exit at Nimble Hill Road or Woodbury Avenue.

Interim Safety Plan (Newington)

The Interim Safety Plan will address the current safety and traffic operational problems at Nimble Hill Road and at River Road due to inadequate weaving distances between these roadways and the median SB to NB turnaround on the Turnpike (Exit 4N). By providing a two-way, grade-separated connection under the Turnpike, between Nimble Hill Road and River Road, the median turnaround will be eliminated, thus eliminating the current weaving conditions. The existing SB on-ramp from the grade-separated turnaround from River Road will also be eliminated which will remove another safety and traffic operational problem. This project is designed and construction will be initiated by next month (June 2005).

Other Newington TSM Actions

Upon completion of the Interim Safety Plan, the SB deceleration lane to Woodbury Avenue can be extended to provide improved operations. In addition, a NB auxiliary lane can be developed between Woodbury Avenue and River Road to provide a better merging and weaving condition for traffic entering the Turnpike from Woodbury Avenue and for traffic exiting at River Road. In addition, access from Woodbury Avenue to Shattuck Way/River Road via the River Road/Patterson Lane connection could be restricted to emergency vehicles only to preclude NB traffic from diverting to River Road in an attempt to bypass Turnpike traffic and rejoin the Turnpike at Exit 4. The NB auxiliary lane will be included as part of the Interim Safety Project

While reducing the level of traffic turbulence and improving the safety of current traffic operations on both sides of the bridges, Frank reminded all that the basic capacity constraints of the bridges and Turnpike would remain.

Frank then reviewed the Transportation Demand Management (TDM) strategies that have been considered to reduce the overall travel demand within the corridor including rail, bus, park and ride facilities, high occupancy vehicle (HOV) lanes and employer-based measures. He noted that the project team had met with transit operators and regional planning staff in developing these alternatives.

From a rail perspective, expansion of the Downeaster service by adding a fifth round trip to run southbound during the AM peak period and northbound during the PM peak period is being considered. [Current daily service includes four (4) round trips between Portland and Boston, with stops at Dover, Exeter and Durham. However, current service does not stop in Dover, Exeter and Durham during weekday peak commuter periods.] This additional peak period train set would run either between Boston and Dover, or Boston through Dover to Rochester, and include a new layover facility in Dover. A second rail alternative involves the inactive Pease Spur rail right-of-way (R.O.W.) in Newington which runs from the industrial area (the Newington Branch Line), across the Turnpike to the Pease Tradeport. The rail R.O.W. is at-grade and was active in the late 1950's and 1960's when Pease was a military base. Frank noted that all of the Newington roadway alternatives maintain a grade-separated R.O.W. corridor for possible future restoration of this rail service.

Frank then discussed three (3) bus alternatives that are under consideration. C & J Trailways currently operates a coach service between Dover and Boston via Portsmouth. This service could be expanded by adding coaches and extending the service area to Rochester. COAST plans to operate new express service between Rochester and Portsmouth along the Turnpike. This service is being

funded through a CMAQ grant and is scheduled to begin in 2006. He noted that the express service could be further enhanced by adding buses to reduce headways and by adding Park and Ride facilities at Exit 9 in Dover and at Exit 12 in Rochester. The park and ride facilities would allow commuters a place to transfer between their private vehicles and the bus service, as well as support ride sharing and van-pooling.

Wildcat Transit and COAST [specifically COAST Route #2 (Rochester-Portsmouth), Wildcat Route #4 (Dover-Portsmouth) and COAST's Tradeport Trolley] operate local bus routes in the study area. These services could be enhanced by adding buses to reduce headways and by providing an interconnection/transfer point at Exit 1 which would allow riders to transfer among the local bus operators. In addition, a new Park and Ride facility could be constructed at the intersection of Route 108 and US 4 in Durham, which would support the Wildcat #4 route, encourage ride sharing and van-pooling and allow the capture of some traffic that would otherwise go to or from the UNH campus. Since there is some overlap among the three bus alternatives, consideration is being given to bundling the three alternatives together which would reduce overall costs, improve system efficiency and maximize ridership.

Frank next referred to 6-lane, 7-lane, and 8-lane HOV (high occupancy vehicle) alternatives that were evaluated, in comparison to the standard 8-lane (4 NB and 4 SB) roadway and bridge cross section, to potentially reduce the scale and impact of future roadway and bridge infrastructure improvements. He noted that four lanes of travel in each direction, combined with expanded transit service and employer-based actions – such as ride sharing and flexible work hours – are required to meet future 2025 travel demands. Given the need for a minimum of three lanes in each direction during summer weekends, the 6-lane concept – with two lanes northbound and southbound and two (2) reversible center lanes – is infeasible. Given the compactness of the study area (relatively short distance between Exits 3 and 6), HOV ridership estimates of barely 50 percent of the minimum volume necessary to justify an HOV lane, and cross-section widths that are greater than the standard 8-lane roadway section, both the 7-lane (single HOV contra-flow lane) and 8-lane concurrent HOV lane alternatives were also deemed infeasible and dropped from further consideration.

Frank reviewed employer-based TDM strategies which could include transit subsidies, ride-sharing, vanpools, alternative work schedules, bicycle and pedestrian facilities, on-site amenities (day care, showers, bicycle storage racks, etc.) and a guaranteed ride home program. He noted that these programs are usually promoted and coordinated with employers through a Transportation Management Association (TMA).

He then described the Little Bay Bridge alternatives which include rehabilitation and widening of the Little Bay Bridges (LBB) with the General Sullivan Bridge (GSB) rehabilitated, rehabilitation and widening of the LBB with the GSB removed, and replacement of the LBB with the GSB removed. All of the alternatives (either 6 or 8 lanes) would build to the west of the existing bridges to minimize the impacts on Hilton Park and the shoreline at Bloody Point. Frank then proceeded to discuss the profile of the Little Bay Bridges in the context of design criteria. He referred to a graphic depicting the existing profile of the LBB which corresponds to a 60 MPH design speed, and a 70 MPH design speed profile overlayed on the existing (60 MPH) profile. He noted that the 70 MPH profile provided slightly more stopping sight distance for the driver, and that the grades on the bridge would be approximately 3.3 percent in comparison to the 3.5 percent grades on the existing profile. He stressed that the driver's sight distance associated with 60 MPH is not a safety deficiency, in comparison to the narrow shoulders (2'-0" to 2'-3") on the existing bridges which are safety deficiencies. He noted that the 60 MPH design speed is 10 MPH greater than the 50 MPH posted speed for the bridges and study area, and that the 50 MPH posted speed was appropriate for the study area. The Turnpike study area is in a zone of transition where abutting land use is developed, interchange spacing is close, and there

are relatively high volumes of traffic entering and exiting the Turnpike and changing lanes. Under these conditions, drivers expect reduced speeds, similar to comparable sections of urban roadways such as I-93 through Manchester and Concord, I-293 in Manchester and I-95 in Portsmouth and Kittery, Maine. The Little Bay Bridge rehabilitation/widening alternatives maintain the 60 MPH design speed profile, address the substandard shoulder deficiencies, improve the traffic weaving conditions which are prevalent on the existing approaches to the bridges, increase capacity on the Turnpike and bridges and have significantly less impacts to Hilton Park and property owners than the Little Bay Bridge replacement and GSB removal alternative to the west of the existing LBB that provide a 70 MPH design speed. Frank noted that under current PM peak hour conditions, traffic flows freely northbound across the bridge, which is constrained by the narrow shoulders and density of traffic, yet, at the same time, traffic congestion and long delays are prevalent from Exit 1 north to the bridge approach. This congestion and delay are due, not to the profile of the bridge, but to the lack of auxiliary lanes to accommodate traffic entering, exiting and changing lanes.

Frank then proceeded to describe the roadway alternatives. In Dover, Alternatives 2 and 3 were very similar – both eliminated Exit 5, converted the overpass at Exit 6 to 2-way operation, reconfigured the Exit 6W off-ramp from a loop to a signalized diamond-type design, added the missing northbound on-ramp, and provided a grade-separated Hilton Park connector (under the Turnpike). Alternative 3 differed in that a grade-separated local connector is provided under US 4 connecting Spur Road with Boston Harbor Road, thus eliminating the need for a traffic signal at the Spur Road/US 4/Boston Harbor Road intersection. [With the local connector, turning movements at this intersection can be restricted to right turns.] In Newington, Alternatives 10, 11 and 12 combine Exits 3 and 4 in the southbound direction via a local traffic connector from Nimble Hill Road to a reconfigured Exit 3 at Woodbury Avenue, industrial traffic access to Exit 3 and the Turnpike is improved, a secondary access connection to the Tradeport is provided to Exit 3, and the existing rail spur right-of-way connecting the Newington Branch to the Tradeport is preserved, in grade-separated fashion, in the event that future rail operations become viable following Turnpike reconstruction. Alternative 10 locates the industrial traffic connector and the rail right-of-way along the existing rail R.O.W. Alternatives 11 and 12 locate the grade-separated industrial traffic connector and rail R.O.W. paralleling Patterson Lane at Exit 3. Both Alternatives 10 and 11 provide a diamond-type interchange at Woodbury Avenue (Exit 3). Alternative 12 is very similar to Alternative 11 except that the southbound on-ramp from Woodbury Avenue is reconfigured from a diamond-type layout (Alternative 11) to a loop ramp (Alternative 12). Frank noted that the cross-section of Woodbury Avenue under any of the alternatives would be limited to two lanes in each direction, separated by a median, with shoulders and sidewalk panels on each side, and would not substantially impact the Isaac Dow House or the Beane Farm building, both historic resources.

Frank then explained that feedback from the ATF and others, coupled with further engineering study, have resulted in recent modifications to Alternatives 10 and 12 in Newington and Alternatives 2 and 3 in Dover. He proceeded to describe the most recent modifications to Alternative 10, noting that the mainline of the Turnpike had been shifted approximately 80′ to the west in order to simplify the construction of the Woodbury Avenue overpass and improve traffic management during construction; the Exit 3 SB on-ramp had been converted from a diamond-type configuration to a loop ramp in order to maximize traffic weaving distance between the Exit 3 on-ramp and the Exit 1 off-ramp; the elevation of the grade-separated railroad R.O.W. and industrial traffic connector to Exit 3 had been lowered by approximately 8 feet which lowered the mainline profile of the Turnpike; and that the limits of slope impacts had been calculated and depicted on the plan. He referred to these revisions as Alternative 10A. Frank then reviewed the lowered profile of Alternative 10A.

Frank then described refinements to Alternative 12 noting similarities to Alternative 10A such as the slight horizontal shift in alignment to the west to improve constructability and traffic management at

Exit 3, and the depiction of the limits of slope impacts due to construction. He also noted that the grade-separated railroad R.O.W. and industrial traffic connector to Exit 3 had been shifted approximately 900 feet to the north to improve the constructability of the Exit 3 interchange and to avoid an existing utility corridor paralleling Patterson Lane, and that the roadway connector to the Tradeport had been realigned to avoid the potential prime wetland area located west of Railway Brook. Frank referred to these modifications as Alternative 12A, and reviewed the mainline Turnpike profile of Alternative 12A, noting that the elevation of the grade-separated railroad R.O.W. and industrial traffic connector had been lowered in Alternative 12A, in similar fashion to Alternative 10A. He noted that the Turnpike, under Alternative 12A, would be approximately 18'-20' above the elevation of the existing NB barrel of the Turnpike at the point where the railroad R.O.W. and industrial traffic connector passed under the Turnpike.

With respect to Alternatives 2 and 3 in Dover, Frank stated that the only refinements pertain to the identification of the limits of potential slope impacts due to construction, and that the Boston Harbor Road/Spur Road intersection had been relocated approximately 150' to the east to increase vehicle storage lanes (Alternative 2) and transition areas for the westbound lane drop on US 4, prior to the Scammell Bridge. He also reviewed the Turnpike's profile between the Little Bay Bridges and Exit 6. He noted that the Hilton Park Connector was located approximately 1,200' north of the bridges, where the Turnpike would be approximately 18' above the existing elevation of the Turnpike to provide clearance for the Hilton Park Connector below. An alternative location for the connector had been considered adjacent to the channel, but Frank explained that potential impacts to parkland, flood plain issues, and additional cost ($5.5 M) deemed this location infeasible in comparison to the northerly alternative.

At this point, Frank paused for questions and comments. An attendee asked the height of the Turnpike above the Hilton Park connector as proposed. Frank replied that the Turnpike would be approximately 18' above the connector road, and that the Turnpike would be elevated for approximately 1500' to the north of the bridges. Vincent Frank, 19 Fox Point Road, Newington, asked how traffic would access the Exxon/Mobil service station located on Nimble Hill Road under Alternatives 10A and 12A. Frank described the traffic routing via the local connector road between Exit 3 and Nimble Hill Road under Alternatives 10A and 12A. Vincent responded that the routing was circuitous and inconvenient in comparison to the existing condition, and he felt that the business would be adversely impacted to a substantial degree. Chris Waszczuk replied that providing an off-ramp at Nimble Hill Road may be possible and will be explored if the community so desires; providing an on-ramp from Nimble Hill Road will be more difficult and presents additional right-of-way impacts and traffic operational constraints than the off-ramp. Gail Pare, 188 Little Bay Road, Newington, also spoke in favor of providing an off-ramp to Nimble Hill Road, if possible. Such a ramp would be very convenient to all residents. She added that local access to the Exxon/Mobil convenience store is also a plus. Gail then asked if it would be possible to retain Exit 5, northbound access to Hilton Park. Chris Waszczuk responded that, given the compactness of the study area, and the growth of the study area over time, maintaining such access would compromise safety. Access to the park will be provided via Exit 6 and the Hilton Park connector road. Chris noted that the Turnpike, in response to historic traffic growth and land development, has evolved from a 2-lane roadway with direct access to abutting properties to a multi-lane facility with limited access. The function of providing local access to abutting properties conflicts with the mobility requirements and expectations of through traffic traveling on a limited access facility.

Noreen McCosker, 16 Old Mill Road, Lee, inquired as to the travel route from Dover to Woodbury Avenue. Frank referred to Alternative 10A and described the southbound route from the Turnpike through Exit 3 to Woodbury Avenue, and the return path from Woodbury Avenue, northbound through the Exit 3 on-ramp to the Turnpike. Noreen asked if the Beane Farm would be impacted. Frank referred to a photograph of Woodbury Avenue in the vicinity of the Beane

Farm, and to a cross section of Woodbury Avenue at the Beane Farm assuming construction of either Alternative 10A or 12A. He noted that the 7' panel to accommodate utilities and a sidewalk would likely impact one or two trees. Chris Waszczuk confirmed that grading of the panel area could impact the trees, but the building will not be impacted. He added that the Department will work with the property owner and community to minimize impacts. Barbara McDonald, 415 Newington Road, Newington, suggested that rail be extended parallel to the Turnpike as a means to reduce travel demand on the Turnpike. Chris Waszczuk replied that the rail right-of-way has been abandoned or encroached upon in several locations or occupied by the Turnpike in others. Such a service was conceptually considered, and would cost approximately $150M. Construction would be very challenging. The ridership potential is low, and does not justify the cost. Barbara responded that the idea of future rail service deserves reconsideration. Frank O'Callaghan noted that preliminary studies determined that less than 200 vehicles would be diverted from the Turnpike under the parallel Turnpike route; in light of the capital cost ($150M) – which doesn't include right-of-way costs – the project team believes expansion of existing service, such as the Downeaster, or expansion of existing transit services is a better use of limited resources. Such expansion of the Downeaster service is an alternative that is being carried forward for further study. Barbara concurred in favor of expanding the Downeaster service. Frank took a moment to review all of the rail alternatives that were initially developed and assessed, and explained that expanding the Downeaster service surfaced as the most practical rail alternative for the study area. He noted that the USEPA, USACOE, SRPC, RPC and the ATF all concurred with the reasonableness of the range of alternatives being carried forward in the DEIS, which includes the expanded Downeaster service as opposed to new rail service down the Turnpike. John Frink, Newington resident, questioned the location of the Nimble Hill Road connector to Exit 3, suggesting a realignment paralleling the Turnpike and using the abandoned section of the Turnpike, as opposed to the proposed location under Alternatives 10A and 12A that parallels Railway Brook. Discussion ensued over various connector road alignments and connections to Woodbury Avenue at Exit 3. Frank noted that such ideas would be considered and tested from a traffic operations and engineering design feasibility perspective. Mr. Frink inquired as to the maintenance responsibility of local roads. Chris Waszczuk replied that while no decision has been made at this early stage of development, local connections are customarily the responsibility of the municipality.

There being no further questions at this point, Frank introduced Tom Wholley to present a brief summary of the preliminary noise analysis that is currently under way. Tom began by reviewing the elements of noise – loudness, frequency and duration – noting that noise travels in a straight line, noise measurements in decibels are logarithmic in nature, and noise is subject to individual perceptions. He reviewed the NEPA process which includes determining existing noise levels, calculating future sound levels, determining noise impacts and evaluating noise mitigation where required. Tom also described FHWA's noise model and the factors – roadway geometry, traffic volumes and traffic speeds – calibration and calculations associated with the model. He noted noise abatement criteria, e.g. 67 dBA for residences, and stated that an increase of 15 dBA or more is considered a substantial noise increase. Tom also reviewed the criteria to evaluate noise mitigation measures; such criteria include: engineering, safety, acoustic performance, cost-effectiveness, development vs. highway timing, land use and views of impacted receptors (i.e. residents' opinions of the proposed mitigation). Tom then referred to a graphic which depicted noise impact areas within the study area. He identified three (3) areas in Newington and five (5) areas in Dover where existing sound levels exceed the noise abatement criteria. Construction of the Turnpike improvements – assuming 8-lanes under Alternatives 10A (Newington) and 3 (Dover), noise levels in the aforementioned areas would increase, at 2025 traffic volume levels, in the range of 1 to 4 dBA, depending on location. He explained that the project related impacts are considerably less than the NHDOT 15 dBA threshold for identifying a substantial noise increase, and that no new areas are created where sound levels exceed the noise criteria. In other words, the areas where existing sound levels exceed the noise criteria are the same areas in 2025 after the

Turnpike is improved where sound levels exceed noise criteria. The increase in noise in these areas, due to the improvement project, ranges between 1 and 4 dBA. Tom concluded his presentation by stating that the NHDOT has no responsibility to mitigate existing noise conditions, but since the project is impacting the existing areas, these areas will be evaluated for mitigation.

A number of questions and comments followed Tom's presentation. Jim Noseworthy had a question concerning the limits of potential mitigation, e.g., how far removed from the Turnpike, or distance down Nimble Hill Road, will mitigation be required? Tom replied that mitigation is usually within 500' of the source. Gail Pare, 188 Little Bay Road, Newington, suggested that Newington Village should be considered a land of extraordinary quiet and serenity and as such, should fall within the noise abatement criteria of 57 dBA, as opposed to the 67 dBA criteria for residential, recreation areas, schools, churches and libraries. An attendee asked for a definition of mitigation. Tom responded that noise barriers serve as mitigation, the design details and location of which would be determined later in design. He offered that NHDOT currently uses concrete and wood. An attendee asked if noise mitigation was incorporated into the Exit 4 Interim Safety Improvements in Newington. Chris Waszczuk replied that study conducted during the design development demonstrated that there was no significant increase in noise level due to the project. Michael Marconi, 19 Coleman Drive, Newington, asked if the noise analysis considered a raised profile of the Turnpike. Tom responded in the affirmative, stating that Alternative 10A was assumed. A number of questions were voiced pertaining to the design of noise barriers. Tom noted that standard design is concrete post and wood beam, and that public input on design and appearance will be sought during design and prior to construction. Economic considerations, e.g., impact/appearance of barrier on waterfront property, will not be considered. Natural vegetation must be 300' deep with dense undergrowth to be an effective noise barrier.
Gail Pare inquired as to the effectiveness of a 3'-4' barrier along the side of the Little Bay Bridges. Tom stated that to be effective, the walls would need to be full height (i.e. the height of a tractor-trailer's exhaust stack). Gail then asked if removing the existing median buffer in Newington due to the widening of the Turnpike would create a safety problem for drivers who will in the future only be separated by a narrow median. Frank replied that since narrow medians are commonplace in most metropolitan areas, drivers are generally familiar with them. Design of vertical and horizontal alignment and median treatment will ensure that drivers are not subject to the oncoming headlights of other drivers.

There being no further questions or comments, Frank O'Callaghan then summarized and reviewed the status of 8 and 6-lane combination options. He noted that only two (2) 8-lane options remain, both of which entail rehabilitation and widening of the Little Bay Bridges (LBB) combined with expanded transit service and employer-based TDM actions. The only difference between these two options is whether or not the General Sullivan Bridge (GSB) is rehabilitated (Option 3) or removed (Option 2). The other three (3) 8-lane options were eliminated from further consideration by the ATF for a number of factors: lack of transit alternatives and TDM actions (Options 1 and 4); and higher cost, the issue of prudency concerning adversely impacting historic resources, greater property and environmental impact, and lack of need to improve the profile of the bridge (Option 5).

Of the 6-lane options, only Option 6 remains which entails the rehabilitation/widening of the LBB, rehabilitation of the GSB, expanded transit service and employer-based TDM actions. Frank noted, unfortunately, that this 6-lane option will not meet the 2025 travel demand, with system breakdown projected to occur around 2017. Of the other four (4) 6-lane options, Options 7 and 8 were HOV-lane alternatives which were not supported by the ATF, and were characterized by insufficient ridership to justify the HOV lane, and cross sections that were wider than the standard 8-lane options. In an effort to increase capacity and minimize impacts, a borrow lane or zipper lane (Option 9) and peak hour shoulder use (Option 10) options were developed. Similar to Option 6, both the LBB and GSB would be rehabilitated and combined with expanded transit

service and employer-based TDM actions. In contrast to Option 6, both Options 9 and 10 provide four (4) travel lanes in the peak direction during the peak hour of traffic. Peak shoulder use (Option 10) has the advantage over the borrow lane concept of having lower operating and maintenance cost. However, Frank noted that FHWA has reservations about both options from a safety perspective and will not support either option as a long-term solution. As such, there are only three options remaining under consideration: the two (2) 8-lane options both of which entail rehabilitation and widening of the LBB combined with expanded transit service and employer-based TDM actions. One of these options (Option 3) rehabilitates the GSB, the other (Option 2) removes the GSB and provides a multi-use pathway on the rehabilitated LBB. The third of the remaining options is the standard 6-lane option (Option 6) of rehabilitating/widening of the LBB and rehabilitation of the GSB combined with expanded transit service and employer-based TDM actions.

Frank compared the cross-section widths of 6-lane and 8-lane typical roadway sections noting that the 6-lane cross section was approximately 118'-122' in width, in comparison to the 142'-146' width of the 8-lane cross section – the difference being approximately 24'. He observed that the existing cross section of the Turnpike varied, and noted that the existing width of the Turnpike in the vicinity of Exit 5 at Hilton Park is approximately 100'. To assist in visualizing the relative scale of both 6 and 8-lane options, Frank referred to an aerial rendering of the Little Bay Bridges and General Sullivan Bridge. The first rendering depicted a 6-lane LBB widened to the west side, followed by a depiction of an 8-lane bridge widened also to the west side. Under the 6-lane widening, the distance between LBB and GSB is approximately 39'; the 8-lane option reduces the separation between bridges to approximately 15'; the 24' difference being the width of the two additional lanes. As a further comparison between 6-lane and 8-lane options, Frank referred to a table summarizing the preliminary wetland impacts associated with 6 and 8-lane options under different roadway alternatives. It was apparent from the summary table that there is not a substantial difference in wetland impacts when comparing 6-lane and 8-lane options. For example, assuming Alternatives 10A in Newington and 3 in Dover, the total difference in wetland impacts between 6-lane and 8-lanes ranged from approximately 0.10 Ac (Alternative 10A) to 0.38 Ac (Alternative 3). Frank noted that similar comparative impact analysis for other resources is currently underway.

Frank concluded the presentation with a couple of brief computer model simulations of 2025 peak hour traffic flow conditions along the Turnpike between Exits 3 and 6 under both 6 and 8-lane options. This comparison clearly demonstrated the need for an auxiliary lane in each direction, in addition to three through lanes in each direction, to be carried between Exits 3 and 6 to manage the volume of traffic that enters and exits the Turnpike and changes lanes between these exits. These operations are critical southbound in the 2025 AM peak hour, and northbound in the 2025 PM peak hour. Under the 6-lane option, the auxiliary/traffic management lanes are provided only at the interchanges for decelerating (exiting) and accelerating (entering) traffic. Under the 8-lane option, the auxiliary/traffic management lanes at each interchange are extended across the bridges to connect with each other. The difference in traffic flow and congestion is dramatic and dependent on whether or not the auxiliary/traffic management lane is extended across the bridge. Frank also referred to a simulation that compared the northbound Exit 6 off-ramp 2025 PM peak hour operations under both the proposed signalized – diamond configuration and the 2-lane loop ramp alternative. As he had described previously, the diamond interchange off-ramp operations will be satisfactory and the queuing of off-ramp vehicles will be contained to the off-ramp. The 2-lane loop ramp raises safety issues and involves additional bridge related costs ($2M). Frank concluded the review of traffic simulations by focusing on 2025 northbound PM peak hour operations at the Dover Toll plaza. Assuming implementation of the EZ Pass system, he compared operations under both the diamond and 2-lane loop ramp alternatives. Operations under the signalized diamond interchange alternative are satisfactory. However, due to the shorter distance of 4-lane storage between the Toll Plaza and the northbound on-ramp under the 2-lane loop ramp alternative in comparison to the signalized diamond alternative, vehicle

queuing under the 2-lane loop ramp is significantly greater and will block the northbound entrance ramp to the Turnpike.

At this point, Frank paused for final questions and comments. Jim Noseworthy, 120 Nimble Hill Road, Newington, stated his preference for a southbound off-ramp to Nimble Hill Road. He also suggested the need for simpler connections to Exit 3 and Woodbury Avenue. Chris Waszczuk replied that the project team would be evaluating his suggestions and other ideas discussed at the meeting and will report back at the next ATF meeting. Gail Pare inquired as to the "voice of Newington" and how best to provide input to the process. Chris responded that the process is one of consensus building, an incremental, step-by-step process of input and feedback from the ATF which has several representatives from Newington. The Newington area is complex with many issues to be resolved. He noted that letters of position from the various town boards and town Officials would also help to identify issues and build consensus. Roger Groux, 278½ Dover Point Road, Dover, asked if thought had been given to increasing video surveillance on the Little Bay Bridges, vis-à-vis incident management, and whether it was possible to improve deicing on the bridges. Chris responded that NHDOT has been working with state and local public safety officials in developing and deploying incident management technology, noting the difficulty of the study area vis-à-vis lack of adequate shoulders on the bridges for example. He added that cameras have been installed on the bridge and will be connected to the state traffic management center in the near future. Pavement sensors have been installed on the bridges and bridge approaches to give real time feedback to maintenance staff. Variable message signs have also been installed to advise travelers of incidents and/or changing travel patterns. An attendee asked if the sight lines at the River Road/off-ramp intersection at Exit 4 had been improved as a result of the Newington Interim Safety Plan. Frank O'Callaghan replied in the affirmative
There being no further questions or comments, Chris Waszczuk thanked all for their attendance and their input.

The meeting ended at 10:05 PM.

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING (PIM) MEETING
NEWINGTON TOWN HALL
MAY 19, 2005

Name Edward Wolfert
Affiliation FHWA
Address 19 Chenell Drive, Ste 1
Concord, NH 03301

Phone /Email Edward.Wolfert@FHWA.DOT.GOV

Name Barbara / Phil Isomure
Affiliation
Address 48 Nimble Hill Rd.

Phone /Email 436 1923

Name Bill O'Donnell
Affiliation Fed. Hwy. Admin
Address 19 Chenell Dr. Suite One
Concord NH 03301

Phone /Email /

Name J Nosworthy
Affiliation
Address 120 N. Main St. #1 Box
Newington NH 03801-7724

Phone /Email /

Name Barbara McDonald
Affiliation Conservation Commission
Address 415 Newington Rd
Newington NH 03801

Phone /Email /

Name Peggy Lamson
Affiliation Town of Newington Conservation Comm.
Address 40 Little Bay
Newington, NH 03801

Phone /Email /

Name Paul W. Parisi
Affiliation SRF
Address 44 Ross Rd
Barrington, NH 03825

Phone /Email 664-5029 / ppan.s4@
driveway.com

Name Gail Pare
Affiliation Newington HDC
Address 188 Little Bay Rd
Newington

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING (PIM) MEETING
NEWINGTON TOWN HALL
MAY 19, 2005

Name Suzanne Russell
Affiliation Residence
Address 756 Nimble Hill Rd
Newington, NH 03801

Phone /Email ____ / ____

Name Richard Lowell
Affiliation ____
Address 3 Browning Drive
Dover, NH 03820

Phone /Email ____ / ____

Name Roy Greenleaf
Affiliation Newington Fire Dept
Address 80 Fox Pt Road
Newington, N.H 03801

Phone /Email ____ / ____

Name Chris Nash
Affiliation NHDES, Resident? Dover
Address 382 Blackwater Rd Dover NH 03820

Phone /Email ____ / ____

Name Brian Greene
Affiliation ____
Address 393 Dover Pt. Rd
Dover NH 03820

Phone /Email ____ / ____

Name [illegible]
Affiliation Richardson Realty
Address 228 Piscataqua Rd
Durham

Phone /Email ____ / ____

Name Michael Mitchell
Affiliation Newington Exxon
Address 1149 Spaulding TPK
Newington NH

Phone /Email 431-2414 / ETM1149@aol.com

Name Terie Norelli
Affiliation State Rep
Address 35 Middle Rd
Portsmouth

Phone /Email 436 9169 / norelli@comcast.net

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING (PIM) MEETING
NEWINGTON TOWN HALL
MAY 19, 2005

Name Steven Ireland
Affiliation NHDOT Dist. 6
Address 271 Main St
Durham NH

Phone /Email 868-1133 /

Name VINCENT FRANK
Affiliation Newington Planning Board
Address 15 Fox Point Rd
Newington NH

Phone /Email VFrank@Comcast.Com

Name Noreen C. McCosker
Affiliation Northeast Medical Prof.
Address 46 Old Mill Rd
Lee NH 03824

Phone /Email 603-868-5077 NCMACCOUNTING @COMCAST.NET

Name CLIFF ABBOTT
Affiliation HANNAH HANDY
Address Newington 03801

Phone /Email 430-3053 /

Name Michael MARconi
Affiliation ABButler
Address 19 Coleman Dr
Newington

Phone /Email 603 / 431-2622

Name
Affiliation
Address

Phone /Email /

Name Edna Mosher
Affiliation Newington BOA
Address 97 Nimble Hill
Newington NH.

Tel. 603-431-2242
Phone /Email /
The Hount97 @aol.com

Name
Affiliation
Address

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING (PIM) MEETING
NEWINGTON TOWN HALL
MAY 19, 2005

Name LARRY WAHL
Affiliation
Address 110 NIMBLE HILL RD
NEWINGTON, NH 03801

Phone /Email 436-7638 /

Name MICHAEL G. BARTLETT
Affiliation 2-Way Communications Service Inc
Address 23 RIVER ROAD
NEWINGTON, NH 03801

michaelb@2-way.biz
Phone /Email 603-431-6288 /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

Name
Affiliation
Address

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATIONAL MEETING (PIM) MEETING
NEWINGTON TOWN HALL
MAY 19, 2005

Name Richard Bakkum
Affiliation Resident
Address 2294 Woodbury Ave
Newington, NH 03801

Phone /Email _____ / rbakkum@comcast.net

Name Roger Groux
Affiliation _____
Address 270 1/2 Dover Pt. Rd
Dover, N.H. 03820

Phone /Email _____ / _____

Name _____
Affiliation _____
Address _____

Phone /Email _____ / _____

Name _____
Affiliation _____
Address _____

Phone /Email _____ / _____

Name _____
Affiliation _____
Address _____

Phone /Email _____ / _____

Name _____
Affiliation _____
Address _____

Phone /Email _____ / _____

Name _____
Affiliation _____
Address _____

Phone /Email _____ / _____

Name _____
Affiliation _____
Address _____

Phone /Email _____ / _____

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Mayor Scott Myers
Councilor Otis Perry
Councilor Matt Mayberry
Councilor Robert Keays
Councilor Doug DeDe
Councilor Dean Trefethen
Councilor Bob Lewis
City Manager Michael Joyal
Valery French, Deputy City Clerk
Bruce Woodruff, Dover, Transportation Planner
Steve Stancil, Dover, Director of Planning
Ray Bardwell, Resident
Jack Newick, ATF Representative, Businessman
Tom Fargo, ATF, Dover Conservation Commission
Chris Waszczuk, NHDOT
Frank O'Callaghan, VHB

Date/Time: October 5, 2005

Project No.: 5142500

Place: Dover City Council

Re: Newington-Dover 11238
Workshop Session –
Dover City Council

Notes taken by: Frank O'Callaghan

The workshop began with City Manager Mike Joyal introducing Chris Waszczuk, NHDOT and Frank O'Callaghan, VHB, to brief the City Council on the status of the Newington-Dover, Little Bay Bridges project, and to answer any questions that the Council may have. He noted that an Advisory Task Force (ATF) representing numerous stakeholders has been working with NHDOT and the design team. Several ATF members were in attendance, including Jack Newick, representing the Dover Point neighborhood, Bruce Woodruff from the City's staff, and Tom Fargo representing both the Dover Conservation Commission and the Strafford Regional Planning Commission. Rick Card, representing the Greater Dover Chamber of Commerce, was noted as not being able to attend due to a conflict.

Chris Waszczuk then briefed the Council on project status. He stated that the study is currently in the middle of the third phase of a five-phase Environmental Impact Statement process. During this current phase, NHDOT is conducting engineering and environmental studies of alternatives that were recommended for further study at the conclusion of phase two of the study. Two alternatives – Alternatives 2 and 3 – have been progressed in Dover. The project's Advisory Task Force has offered input and insight in the development and refinement of the alternatives. Chris noted that to date, 14 ATF meetings have been held either in Dover or Newington which provide a forum for input and feedback vis-à-vis the development and refinement of alternatives. At the most recent ATF meeting

held in Dover on August 25, 2005, the Dover alternatives were reviewed with the intent to solicit additional input prior to formulation of a preferred alternative. Issues such as the need for three versus four lanes in each direction, and whether the General Sullivan Bridge (GSB) would be rehabilitated or removed were discussed. Chris concluded by noting that three Newington alternatives remain under consideration, and that public informational meetings are being scheduled for the first week in November at both Dover City Hall and Newington Town Hall. These meetings would be followed by a Public Hearing, which is targeted for the spring of 2006.

Frank O'Callaghan then briefly described Alternatives 2 and 3 which were developed to improve safety conditions, increase transportation efficiency while minimizing environmental and property impacts. He noted common elements of both alternatives including a grade-separated local connector under the Turnpike to link both E-W Dover Point neighborhoods and both sides of Hilton Park, the closure of Exit 5, reconfiguration of the Exit 6 northbound interchange to a signalized diamond-type interchange, closure of the Cote Drive access to the Turnpike, two-way traffic flow on the overpass of the Turnpike, a new northbound on-ramp to the Turnpike at Exit 6 and closure of the Boston Harbor Road ramp to the Exit 6 southbound on-ramp. Frank noted that there were two business property impacts – K-9 Kaos and Adaptations, both located on Dover Point Road. He also reviewed changes in local traffic patterns resulting from the closure of Exit 5.

Frank stated that the difference between Alternatives 2 and 3 was that Alternative 3 includes a connector road between Spur Road and Boston Harbor Road under US 4 for local traffic. This would allow the elimination of the traffic signal at the Spur Road/Boston Harbor Road intersection by limiting the turning movements to right-turns only. He also compared the proposed northbound signalized-diamond interchange configuration to a two-lane loop ramp option, noting that the proposed diamond configuration would be safer, cost approximately $2 million less to construct, and would avoid the potential for vehicles queuing back from the Dover toll facility and blocking the northbound on-ramp which would occur under the two-lane loop ramp concept. He also noted the potential for a traffic signal required in the future at the Dover Point Road intersection located to the east of the Exit 6 northbound off-ramp.

Frank next discussed the local Dover Point connector option. The current proposal locates the connector approximately 1200 feet north of the channel and results in an elevated Turnpike profile. In this proposal, the GSB is retained, and the existing pedestrian/bicycle connection between both sides of the project would be maintained abutting the channel. An alternative recommended by Bruce Woodruff and Tom Fargo, which is currently under study, is to locate the local connector adjacent to the channel, and retain the GSB for pedestrian, bicycle and recreational use. This requires the existing roadway approach to the GSB to be reconstructed as the descending approach for the connector road. This local connector is envisioned to be 30' wide (11' travel lanes with 4' shoulder areas) beneath the Little Bay Bridges and have a 14'5" vertical clearance. This option would also retain the pedestrian/bicycle connection between both sides of the park. Frank noted that preliminary study indicates the feasibility of this option, which would lower the Turnpike profile (in comparison to the current proposal) and would be approximately $4 million less to construct. The lower profile would minimize noise and aesthetic impacts. Frank noted that by widening the Little Bay Bridges (LBB) to the west, between the existing LBB and GSB, there would be no impact to Hilton Park, whether the widening was to 6 or 8 lanes, or whether or not the GSB was rehabilitated or removed. If the GSB were removed, a multi-use (pedestrian/bicycle/recreation) path would be attached to the widened LBB.

Frank concluded his presentation by reviewing the EIS process and the project schedule, and noting that TDM alternatives (such as transit and employer-based programs) were also being considered to complement the bridge and roadway infrastructure improvements.

Councilor Mayberry, who resides in the study area, complimented the NHDOT and thanked them for an extensive public outreach program. He asked if sound barriers had been located and designed to mitigate noise impacts. Chris responded that the noise impact analysis and potential noise mitigation plans were currently under development and would be presented at the next ATF meeting scheduled for October 26, 2005. Councilor Mayberry then inquired if there would be property takings as a result of the project. Chris replied that both K-9 Kaos and Adaptations would be impacted, and that right-of-way acquisitions, based on fair market value, would occur following the public hearing process, likely in a 2008 timeframe. In response to an inquiry, Chris added that an early acquisition of the properties is a possibility in response to a property owner request. Councilor Mayberry noted that changes in local traffic patterns would result in an increase of traffic along Dover Point Road. Frank O'Callaghan concurred and replied the capacity of Dover Point Road was more than adequate for the additional volume, that measures to calm traffic along Dover Point Road could be considered. With respect to the proposed Boston Harbor ramp closure, Frank stated that the ramp closure would allow a single lane merge with the Turnpike which will be safer and more efficient than the current two-lane ramp merge, particularly during the weekday AM peak hour.

Councilor Mayberry stated that he supports the location of the local connector adjacent to the channel, retaining the GSB for pedestrian/bicycle/recreational use, and widening the LBB and Turnpike to four lanes in each direction. Frank noted that the fourth lane is a traffic management lane for vehicles entering and exiting the Turnpike between Exits 3 and 6. Councilor Mayberry inquired whether or not the fourth lane could be used as a breakdown lane in the short turn, and then restriped when future travel demands warrant. Frank replied that the Federal Highway Administration (FHWA) would not support use of the shoulder areas as a long term transportation solution for the study area. Councilor Mayberry inquired as to the status and schedule for completion of the interim safety improvements currently under construction in Newington. Chris Waszczuk replied that the project would be completed next year.

Councilor Trefethen congratulated the NHDOT and everyone involved in the project for the work accomplished to date, and for the high level of public input sought. His first question pertained to the pros and cons of retaining the GSB. Frank responded that the bridge is the second highest rated historic structure in New Hampshire, and in potentially impacting the bridge (as in removing it), it must be demonstrated to federal officials that there is no feasible and prudent alternative that avoids or minimizes impact to the bridge. Since rehabilitating the bridge is feasible, it remains a question of prudency vis-à-vis the project cost of rehabilitation and future maintenance costs. At this point, both the options of bridge rehabilitation and bridge removal remain on the table. Chris Waszczuk added that both the FHWA and NH Division of Historic Resources (DHR) have deemed the GSB a significant historic resource. He noted that the net project cost of rehabilitating the bridge would be approximately $9-10 million. Retaining the GSB would also provide a measure of redundancy and flexibility in the future.

With respect to the Exit 6 interchange, Councilor Trefethen noted the high volume of truck traffic which exits northbound to travel west on US 4, and questioned the stopping, queuing, and starting of truck traffic at the proposed signalized ramp terminal. Frank replied that traffic operations would be satisfactory at the traffic signal, and off-ramp traffic would not queue back onto the Turnpike. He noted that, in contrast to a two-lane loop ramp alternative, the proposed signalized-diamond interchange configuration will be safer and very efficient with respect to processing traffic. Councilor Trefethen stated the need for simple and straight-forward designs; he suggested that the profile of the existing LBB was problematic, causing traffic to slow which results in congestion and back-ups. The proposed bridge options appear not to address this situation. Frank responded that the existing profile is adequate for 60 mph stopping sight distance and is more than adequate for the posted 50

mph study area. He explained that the cause of traffic delay and congestion between Exits 1 and 6 results from the volume of traffic that enters and exits the Turnpike between Exits 3 and 6 and the lack of adequate traffic management lanes to facilitate the acceleration, deceleration and lane changing that results when vehicles enter and exit the Turnpike. This condition is exacerbated by the number of interchanges and their relative proximity to one another.

Councilor Trefethen noted the resultant traffic congestion when there is an accident on the bridge and vehicles are not removed until police arrive and conduct preliminary investigations. Frank responded that the lack of adequate shoulders compounds the response to such accidents and the duration of related traffic congestion and delay. He added that variable message signs have been deployed in the region as part of the state's incident management system to give drivers advance warning of such an incident and allow them to alter their route and avoid or minimize the travel delay related to the incident.

Councilor Lewis presented the Hilton Park Master Plan developed in 2001 and stated his concern that planned improvements to the boat launch, dock and parking area had yet to be implemented, and the need for these improvements is immediate. He suggested that the park should be enhanced as part of the Newington-Dover project. Chris Waszczuk responded that NHDOT is coordinating and communicating with NH Fish & Game Department; he noted that the mitigation to enhance the park is difficult to justify since the project has no physical impacts on the park. However, NHDOT will continue to coordinate with NHF&GD.

Councilor Mayberry noted that it is his understanding that Executive Councilor Ruth Griffin will be coordinating a meeting between NHDOT and NHF&GD to discuss Hilton Park.

Councilor Lewis also stated that he hoped public transit alternatives were also examined as part of the Newington-Dover project. Frank O'Callaghan replied that indeed a number of bus transit, park-and-ride facilities, rail, and employer-based travel demand management (TDM) strategies have been analyzed. While ridership estimates do not preclude the need to widen the Turnpike, a number of TDM alternatives are also recommended to complement the Turnpike widening including new park-and-ride facilities in Dover, Rochester and Lee, expanding intercity and local bus transit, increasing the Downeaster rail service, and supporting employer-based TDM strategies.

Mayor Myers expressed reservation with respect to traffic operations at the proposed Exit 6 diamond interchange. He suggested that more traffic would be encouraged to use the new northbound on-ramp if it was toll-free. Chris Waszczuk acknowledged the attractiveness of a toll-free ramp, but also pointed out that US 4 traffic and Dover Point traffic will find the new on-ramp to be more convenient than traveling north on Dover Point Road to access the Turnpike at Exit 7. The mayor inquired if the on-ramp from Exit 5 could be preserved. Chris responded that the compactness of the study area coupled with the number of interchanges and their proximity to each other precludes the possibility of retaining an Exit 5 on-ramp based on safety and traffic operations. Mayor Myers also expressed his support for the proposed short-term transportation systems management (TSM) action which would close the Boston Harbor Road on-ramp to the Exit 6 southbound ramp and improve the merge of southbound entering traffic with through traffic on the Turnpike. The mayor then opened the workshop to public comment.

Bruce Woodruff stated that he is the City staff representative on the project Advisory Task Force, and has been charged with minimizing the potential impacts of the project on Dover Point and Hilton Park. He noted that one has to balance the impacts while protecting the neighborhoods and improving the transportation system. He cited Alternative 1 – the two lane loop ramp concept –

which was not advanced for reasons that included impacts to many residential properties. He stated that he and others were successful in working with the NHDOT to lower the Turnpike profile which reduces noise levels and improves the visual aesthetics of the area, and that they were instrumental in assuring that expanded transit service would also be part of the overall transportation system improvement. He noted that he has been an advocate for preserving the GSB for transportation and recreational use. Bruce closed by stating his support for Alternative 3 with the local connector roadway located adjacent to the channel, and the preservation and rehabilitation of the GSB.

Tom Fargo, who represents the Strafford Regional Planning Commission on the project Advisory Task Force, and who also serves on the Dover Conservation Commission, stated his pleasure and support for the location of the local connector road adjacent to the channel and noted that he is convinced of the merits of the signalized diamond interchange at Exit 6. He supports Alternative 3 as proposed.

Jack Newick, also representing the City of Dover on the project's Advisory Task Force, congratulated the project team on a job well done. He expressed hope that NHF&GD would consult him and other fishermen as they advance plans to rebuild the pier and boat launch area. He also noted that he would favor retaining the Exit 5 off-ramp and/or on-ramp, if it was feasible with respect to safety and traffic operations.

Ray Bardwell also congratulated the project team, but stated his preference for a two-lane loop ramp at Exit 6 for northbound to westbound exiting traffic, as opposed to the proposed signalized diamond interchange. He noted that if Alternative 3 was endorsed as proposed, he favors the retention of the traffic signal at the Spur Road/Boston Harbor Road intersection. Ray also favors retention of the Exit 5 on-ramp, if possible, and supports the need to improve the boat ramp at Hilton Park. He asked, assuming that the GSB is rehabilitated as part of the preferred alternative, if the piers of the LBB and GSB would be connected to reduce or eliminate the whirlpool of currents between the bridge piers. Chris Waszczuk replied in the affirmative.

The City Council workshop adjourned at 8:55 PM.

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Bill O'Donnell, FHWA
Pete Walker, VHB
Tom Wholley, VHB
Frank O'Callaghan, VHB

Date/Time: November 7, 2005

Project No.: 51425.00

Place: Dover City Hall

Re: Newington-Dover, 11238
Public Informational Meeting

Notes taken by: Frank O'Callaghan

Chris Waszczuk, NHDOT Project Manager, called the meeting to order at 7:05 PM. He welcomed those in attendance and requested those in attendance to sign-in. He noted that this evening's public information meeting was part of a substantial public outreach program; over the course of study there have been 15 Advisory Task Force meetings, 5 Public Information Meetings and 12 Resource Agency meetings to date. The project team, with input from the public, local, state and federal officials, has attempted to identify a preferred transportation improvement alternative for the Newington-Dover study area. Chris then introduced project team members Frank O'Callaghan, Pete Walker and Tom Wholley from VHB. He reviewed the meeting agenda noting that the project team was looking for input, and that there were three (3) scheduled breaks in the approximately 90 minute presentation for public comment and question. The presentation would include a description of a suggested preferred alternative.

Chris reviewed the project's purpose which is to reduce safety problems and improve transportation efficiency for an approximately 3.5 mile long section of the Spaulding Turnpike beginning at the Gosling Road Interchange in Newington and extending across the Little Bay Bridges to a point just south of the toll plaza in Dover. Chris then reviewed the project need citing the importance of the Spaulding Turnpike from commuter, commerce, and tourist perspectives; its designation as part of the National Highway System (NHS); and its function as a limited access highway linking the seacoast region with I-95, Concord, the Lakes Region and the White Mountains. He cited the historic growth of traffic and future travel projections, the poor levels of traffic service, existing geometric constraints and deficiencies and the history of traffic accident experience. He noted that the compactness of the 3.5 mile study area and short spacing between the six (6) interchanges within this section of the Turnpike constrain traffic operations, and exacerbate the impacts of a traffic accident, given the lack of suitable alternate routes to the Turnpike. Chris also noted that the Turnpike bisects local residential, recreational and commercial areas, and that there exists a need for local connectivity of motorists, pedestrians and bicyclists between the east and west sides of the Turnpike in both Newington and Dover. He stated that the Little Bay Bridges are major structures located on an important highway in a moderate seismic area and were not designed to meet the current seismic criteria for this region. He noted that the Newington-Dover Spaulding Turnpike project was

included in the State's Ten-Year Transportation Improvement Program and was the highest long-term transportation priority of the Seacoast Metropolitan Planning Organization. He stated that as the area continues to develop and traffic volumes increase, traffic operations and safety conditions would worsen. If nothing is done to improve the Turnpike, it is estimated that 2025 weekday periods of traffic congestion will lengthen to more than three times the existing congested periods.

Chris then reviewed the five (5) phases of an Environmental Impact Statement (EIS) noting that the EIS is the highest order of study required by the National Environmental Policy Act (NEPA). The project Scoping Report, published in March 2004, summarizes the Phase 1 activities, which included the project's purpose and need statement, inventories of environmental resources, analysis of existing traffic conditions and projections of future travel demands, and the identification of the range of typical alternatives that would be considered. The Rationale Report, published in January 2005, and available on the project website, summarizes the development, screening and range of reasonable alternatives to be carried forward into Phase 3 of the study. Current Phase 3 activities include the detailed evaluation and impact analysis of alternatives, and the identification of a preferred alternative. At the conclusion of Phase 3 in February 2006, a draft Environmental Impact Statement (DEIS) will be published. A joint FHWA/ACOE/NHDES/NHDOT Public Hearing (Phase 4) on the Preferred Alternative is targeted for May 2006 and is a critical project milestone. Phase 5, which is scheduled for September 2006 – June 2007, will focus on finalizing the EIS by responding to comments on the Draft EIS and comments from the Public Hearing. The FHWA Record of Decision is another milestone (June 2007), which will allow final design and right-of-way acquisition to be initiated. Assuming the availability of funding and procurement of the necessary approvals and permits, construction could begin as early as fall of 2008 and would likely require five or six construction seasons.

Chris concluded his introductory remarks by noting the importance of public participation, and the openness of the process. He explained that a project Advisory Task Force – comprised of representatives of the municipalities of Newington, Dover, Portsmouth and Durham, the Rockingham and Strafford Regional Planning Commissions, COAST, the Pease Development Authority, the Great Bay Estuarine Research Reserve, and the Greater Dover and Portsmouth Chambers of Commerce, FHWA and NHDOT – has met 15 times during the course of the study and acts as a forum for communication, providing early and continuous input to the project team and feedback to their respective constituencies. In addition, five Public Information Meetings have been held to date during each phase of the project in both Dover and Newington locations to solicit input from abutters and public officials, and a project website, www.newington-dover.com, is maintained that provides a wealth of project related information such as reports, plans, meeting minutes, and frequently asked questions. The website is also another means of public input to the project team. Chris concluded by stating that the public participation process will culminate in the Public Hearing which will seek to garner approval for the layout. A special committee, comprised of three Executive Councilors, will oversee the Hearing and accept testimony, and the project team will address all comments.

At this point, Chris introduced Frank O'Callaghan to review the project background. Frank began by describing the project study area as extending north from Exit 1 (Gosling Road/Pease Boulevard) of the Turnpike on the south and traversing the Little Bay Bridges to a point just south of the Dover Toll Plaza and bounded by the Piscataqua River on the east and Little Bay on the west. He noted many study area resources and issues such as marine habitat, navigation, water quality, tidal and surface wetlands, floodplains, ground water, hazardous materials, visual resources, park and recreational activities, historic and cultural resources and potential residential and commercial property impacts. He stated that air quality analyses have determined that the project will comply with state and federal air quality requirements. He noted that his colleague, Tom Wholley, would present findings on noise impacts and proposed noise mitigation later in the presentation. He also noted that direct

and indirect and cumulative socio-economic impacts have been assessed for a 33-municipality study area. A draft report summarizing the analysis of direct, indirect and cumulative socio-economic impacts is currently being reviewed by state and federal resource agencies. He stated that the March 2004 Scoping Report summarized many of the inventories of environmental resources.

In summarizing safety conditions, Frank noted that study area traffic accidents during the 1998-2003 period totaled 1,119, and increased by approximately 55 percent in comparison to the previous 6-year, 1992-1997, period (719 total). During the 1998-2003 period, accidents increased at approximately 9.3 percent per year in comparison to the average annual traffic volume growth of approximately 2.4 percent per year. He also reviewed traffic volume growth where average daily traffic (ADT) volume on the bridges has increased from approximately 30,000 vehicles in 1980, to over 70,000 in 2003, and is projected to grow to over 94,000 vehicles per day by the year 2025. This 33 percent growth in traffic above 2003 levels will require the equivalent of four travel lanes in each direction across the Little Bay Bridges (LBB). He noted that current weekday peak hour capacity constraints extend from Exit 6 southbound to Exit 3 (Woodbury Avenue) in the morning, and from Exit 3 northbound through Exit 6 in the evening. These capacity conditions are compounded by a number of geometric deficiencies including substandard shoulder width on the Little Bay Bridges, substandard turning radii at many of the interchange on and off ramps, and inadequate weaving distances in both the northbound (Shattuck Way) and southbound (Nimble Hill Road) Exit 4N - Exit 4 area. As traffic volumes grow, the safety and traffic operational conditions, which are currently constrained, will worsen. For example, if the Turnpike is not improved, current weekday peak hour periods of congestion will double in the morning and more than triple in the evening by 2025.

Frank then presented some general bridge information for both the Little Bay Bridges and the General Sullivan Bridge (GSB). The Little Bay Bridges are characterized by substandard shoulder widths and 3.5 percent grades on a crest vertical curve, which restricts driver sight distance to a 60 mph design speed (design speed being the maximum safe operating speed governed by the vertical alignment or profile). The 2-lane bridges have minor deterioration and the substructure for both bridges – composed of reinforced concrete – was designed and constructed in 1966 prior to the current, more stringent seismic resistance requirements. Frank then enumerated several factors that would affect the rehabilitation alternatives for the General Sullivan Bridge. Four percent grades on a crest vertical curve that limits driver sight distance to a 45 mph design speed. The cross-section is limited to 24' between the curb lines and 2'-11" sidewalks on each side. In addition, the deck, girders and truss members exhibit major deterioration, and there is extensive substructure deterioration. The General Sullivan Bridge is also historic – being the second highest-ranking historic bridge in the state -- and subject to lead paint removal and re-painting.

At this point, Frank paused for questions and comments. Andy Swett, a Boston Harbor Road resident, asked if the EIS would address issues such as noise during construction. Frank replied that it would.

There being no further questions or comments, Frank proceeded to present the suggested preferred alternative. He noted that the suggested preferred alternative resulted from the analysis of impacts and evaluation of the range of reasonable alternatives that were carried forward from Phase 2 of the study, including the No-Build, Transportation System Management (TSM), Travel Demand Management (TDM), Bridge and Roadway/Interchange Improvements and combinations thereof. He began by focusing on the Little Bay Bridges (LBB), which are recommended to be rehabilitated and widened to four lanes in each direction. Frank stated that three general purpose lanes and one traffic management lane would be required between Exits 3 and 6, which would provide a satisfactory level of service (LOS D) beyond the 2025 design year. He noted that 3 lanes in each direction combined with the most aggressive combinations of travel demand management (TDM)

would not provide a safe and adequate level of traffic service and would not meet the project purpose and need. The rehabilitation and widening of the LBB would hold the existing 60 mph design speed profile and the existing vertical clearance over the channel. The bridge piers would be seismically retrofitted, and the bridge construction would be completed in two phases so that two lanes of travel in each direction would be maintained at all times. Bridge widening would be to the west to avoid impacting Hilton Park and to minimize impacts to the bay. Frank noted that four lanes in each direction between Exits 3 and 6 would provide future flexibility for lane management beyond 2025. Preliminary cost estimates are approximately $55.5 million, which is approximately $38 million less than a new bridge would cost.

With respect to the General Sullivan Bridge (GSB), the project team is recommending rehabilitation to six-ton loading, which would support maintenance and emergency vehicles, and use by pedestrians and bicyclists, and for other recreation. Frank noted that the GSB is the second highest rated historic bridge in New Hampshire and is eligible for the National Register of Historic Places. It is a 4(f) resource and afforded protection under federal regulations; it provides an important pedestrian and bicycle system connection and is utilized for recreational activities. He stated that these uses would be more pleasurable on the GSB in comparison to the multi-use path alternative attached to the LBB. The GSB would also provide future flexibility and redundancy with respect to incident management and transit use. The approximate project cost of the GSB rehabilitation is $23 million, approximately $10 million more than its removal and replacement with a multi-use path, not including the additional cost of mitigation likely required should the GSB be removed (*i.e.*, if the GSB was removed, additional mitigation cost would be incurred which would reduce the $10 million cost differential between bridge rehabilitation and bridge removal). Frank stated that the FHWA, NHDHR, SRPC and City of Dover support bridge rehabilitation, and suggested that it would be difficult, from a 4(f) perspective, not to justify the expenditure of funds given the feasibility of reuse and net cost difference ($10 million) relative to total project cost (approximately $174 million).

Frank next described Alternative 3 in Dover, which provides a full service interchange at Exit 6, improving both system and local connectivity. He noted major characteristics including the closing of Exit 5 and the Cote Drive on-ramp, the diamond-type configuration for northbound travel, two-way traffic flow on the overpass, the grade-separated connector between Spur Road and Boston Harbor Road that eliminates the need for a traffic signal at the Spur Road/Boston Harbor Road intersection, a short on-ramp from the connector road to the southbound on-ramp which has the effect of maintaining the existing Boston Harbor Road ramp, and the local connector road adjacent to the channel linking both sides of Dover Point and Hilton Park. Frank paused and compared existing traffic patterns with changes resulting from Alternative 3. With respect to the local connector abutting the channel, he noted that the roadway would be designed for 20 mph, two-way traffic, and that 14'-6" vertical clearance would be provided for trucks and boats. The existing pedestrian and bicycle connection between both sides of Hilton Park would also be maintained. He pointed out that limiting the GSB to pedestrian and bicycle use allowed reconstructing the GSB approach for the local roadway connector and avoided impacting Hilton Park. An ADA-compliant ramp would be constructed for bicycle and pedestrian access to the GSB. By locating the local roadway connector adjacent to the channel, the turnpike profile could be lowered which would reduce noise and visual impacts. Frank noted that two Dover Point Road businesses – K-9 Kaos and Adaptations, would be impacted, retaining walls on both sides of the Turnpike would be utilized to minimize impacts, and that the construction cost of Alternative 3 was approximately $44 million which included the LBB approach.

Frank then proceeded to describe Alternative 13 in Newington, which reconfigures Exit 3 (Woodbury Avenue) as a full service interchange with both off and on-ramps in both northbound and southbound directions. A roadway connection to the Tradeport is provided at Exit 3, and the Exit 4 off and on-ramps to Nimble Hill Road (southbound) and Shattuck Way (northbound) are maintained,

as well as the two-way Shattuck Way extension to Nimble Hill Road which is currently under construction as part of the Interim Safety Improvement project. Northbound Exit 2 would be closed with traffic re-routed through Exit 3. Alternative 13 allows for a future rail project to reconnect the Pease Spur and the Newington Branch Line by traversing above the Turnpike along the existing rail corridor. As part of the Newington-Dover project, it is recommended that the necessary right-of-way and easements be secured, a portion of the viaduct's pier foundation (located in the Turnpike's median) be constructed, and a memorandum of agreement between the NHDOT and PDA on future construction cost-sharing be secured. By carrying the rail connection over the Turnpike, the Turnpike's profile can be kept at its existing elevation, which reduces noise and visual impacts as compared to previous alternatives that had proposed to elevate the Turnpike over the rail corridor. The existing ExxonMobil facility would continue to operate at its current location via access from a new local connector road at its rear that would intersect Nimble Hill Road opposite Shattuck Way. The facility's existing driveway on Nimble Hill Road is proposed to be discontinued. Overall, local connections and Turnpike access are improved, and the service life of Exit 1 (Pease Boulevard/ Gosling Road) would be extended due to the additional access to the Tradeport provided at Exit 3. Frank noted that the Woodbury Avenue cross-section had been reduced to avoid impacting the historic Isaac Dow House and Beane Farm structures. Alternative 13 is estimated to cost approximately $47.3 million and impact approximately 25 acres of Tradeport property.

Frank then addressed Transportation Systems Management (TSM) alternatives, described as relatively low cost, short-term actions to improve existing safety and traffic operational conditions. He noted that improved directional signage at Exit 6, increased signage on the LBB approaches to remind drivers not to change lanes, and restriping of the shoulder area to increase the northbound Exit 6 deceleration lane to US 4 westbound had already been implemented. The Interim Safety Improvement Project at Exit 4 in Newington is under construction and will be completed in 2006. This project eliminates deficient traffic weaving conditions between Exits 4 and 4N, improves local traffic connections between Nimble Hill Road and Shattuck Way/Woodbury Avenue, and improves the northbound merge condition at Exit 3 for Woodbury Avenue traffic. The restriping of the Exit 6 southbound on-ramp to reduce the merge of traffic from two lanes to one is also recommended to improve traffic flow in the short term.

Frank next described the recommended Travel Demand Management (TDM) program of alternatives to reduce the level of peak period traffic within the study area, and to give seacoast area commuters more options as to how and when they travel. He noted that the TDM program encompassed new park-and-ride facilities, expanded bus service and rail service, and employer-based measures. With respect to park-and-ride, a new 416-space facility is currently under design at Exit 9 in Dover, and will be constructed in 2006 as a separate CMAQ-funded project. The facility will be serviced by the planned COAST express bus service (Rochester-Portsmouth), Dover's downtown transit loop service, and expanded commuter bus service proposed by C&J Trailways. A 200-space facility is recommended for the Exit 13 area in Rochester, and is envisioned to be implemented under a separate CMAQ-funded project, and be coordinated with the Turnpike improvements currently being planned and designed for the Exit 13 area. A 50-space facility is also recommended for the US 4 corridor to be located in Lee in the vicinity of the US 4/NH 125 traffic circle and also funded under the CMAQ program as a future CMAQ project.

With respect to expanding bus service, Frank described three alternatives. Alternative 1 expands intercity service between Rochester, Portsmouth and Boston. C&J has filed a CMAQ application to extend service north to the proposed Exit 9 park-and-ride facility in Dover by providing 16 daily round trips from Portsmouth. This service would then be extended to Rochester by either C&J or another provider as soon as the Exit 13 park-and-ride facility is completed. The capital cost of extending the service to Rochester would range between $2 and $4 million, depending on the level of service and provider. Bus Alternative 2 involves adding a bus to the proposed COAST express bus

service between Rochester and Portsmouth to reduce peak period headways. This service is programmed for 2006 and could be expanded as proposed for a capital cost of approximately $400 thousand, and funded via a CMAQ grant or through project funding. Bus Alternative 3 involves expanding local service on COAST Route 2 (Rochester-Portsmouth), Wildcat Transit Route 4 (Durham-Portsmouth) and the COAST Pease Trolley by reducing headways during peak periods. In addition to adding additional buses, an improved transfer point for these three routes would be developed in the vicinity of Exit 1 and the malls. The capital equipment and construction cost of Bus Alternative 3 is approximately $3.9 million.

From a rail perspective, Frank stated that NHDOT was supporting a joint MaineDOT/NHDOT CMAQ proposal to expand Downeaster service between Portland and Boston. Expanded service would add a fifth daily round trip between Portland and Boston, and improve the peak hour schedule of commuter service through New Hampshire by constructing sidings in Dover and Newfields and replacing approximately three miles of track in New Hampshire. The total cost of this proposal is approximately $6 million with the NHDOT CMAQ share approximately $1.2 million.

The final element of the recommended TDM program would be extending the funding of Seacoast Commuter Options, the greater Portsmouth and seacoast region transportation management association (TMA), which promotes employer-based options to commuting alone such as ridesharing and transit. Frank closed his presentation by stating that the overall total cost of the suggested preferred alternative is approximately $174 million. He then paused for questions and comments.

Ray Bardwell, 199 Spur Road, Dover, expressed concern for traffic exiting Spur Road and the need to accelerate on US 4 westbound. He suggested deceleration and acceleration lanes be added on US 4 to improve entering and exiting Spur Road. Frank replied that there would be adequate gaps in the US 4 traffic stream for the Spur Road traffic to enter safely. The merits of adding acceleration and deceleration lanes will be investigated. State Representative Jennifer Brown asked if the existing walkway adjacent to Pomeroy Cove would remain. Frank replied that the walkway would be perpetuated. City Councilor Matt Mayberry suggested that a sidewalk should be extended along Dover Point Road, south of Boston Harbor Road to account for the pedestrian activity and the potential increased volume of traffic. Frank replied that extending the sidewalk from Boston Harbor Road along Dover Point Road could be considered. Carole Cartrick, 53 Boston Harbor Road, asked the purpose of the Spur Road/Boston Harbor Road connector. Frank replied that it improves local connectivity for both motorized and non-motorized traffic. A resident asked how one would bike to Newington from Dover on the east side of the Turnpike and Dover Point Road. Frank replied that one would travel along the Pomeroy Cove/Wentworth Terrace path to Hilton Park, cross under the Turnpike in the park at the channel, and then travel across the GSB to Shattuck Way and Nimble Hill Road. Ray Bardwell asked how traffic would be controlled at the Spur Road/Connector Road intersection. Frank replied that the intersection would be under stop sign control. Gordon Smith, 14 Boston Harbor Road, questioned the effectiveness of the proposed Dover TSM2 action, citing the current morning peak hour backup from the southbound Exit 6 on-ramp to the Scammell Bridge. Frank replied that converting the existing 2-lane merge to a single lane merge will diminish the current level of traffic turbulence and result in a smoother traffic operation and less delay. It will not eliminate the existing capacity deficiency on the LBB. A Dover resident agreed with Frank, and endorsed the Dover TSM2 proposal, noting that the proposal will not impact many Boston Harbor residents. Frank added that reconfiguration of the merge of the southbound on-ramp and the closing of the Boston Harbor Road on-ramp could be implemented on a temporary trial basis.

John Scruton asked if the LBB would be wide enough to accommodate a future rail line. Frank responded that a number of rail alternatives were considered, and expanding existing Downeaster service appears the most feasible and least impacting. A rail alternative running parallel to the

Turnpike between Rochester and Portsmouth would divert relatively few vehicles from the Turnpike, would cost in excess of $140 million to construct and would have extensive property and environmental impacts. Ray Bardwell reiterated his concern about the Spur Road/US 4 intersection, noting the need for intersection design to accommodate the turning of trucks, and the crossing of US 4 by pedestrians. Chris Waszczuk replied that pedestrians could be accommodated along the connector road between Spur Road and Boston Harbor Road. Ray responded that such routing of pedestrians would be inconvenient for some. Chris replied that a pedestrian signal at the Spur Road/Boston Harbor road intersection, if warranted, could be considered.

There being no further questions or comments, Frank introduced Tom Wholley to discuss noise impacts and proposed mitigation. Tom reviewed the procedures, guidelines and criteria for conducting analyses and developing mitigation. He noted that noise level criteria for potential mitigation include 66 dB for residential land use, or an increase of 15 dB between existing and future conditions. Tom stated that 14 noise sensitive areas were identified and monitored during the noisiest hours of the day to determine existing noise levels, and to calibrate the FHWA Traffic Noise Model. Traffic model inputs reflect topography, traffic volumes and roadway features (such as profile), and allow the model to be used to compare existing noise conditions with future 2025 scenarios and various alternatives.

Tom noted that noise levels of 1 to 3 dB are barely perceptible, and that a change in noise of 10 dB is the equivalent of doubling the noise level. With respect to the comparison of future study area conditions to existing noise levels, impacts generally ranged between 2 and 6 dB, substantially less than the 15 dB criterion for requiring noise mitigation. However, some study area locations in Dover exceed 66 dB under future conditions (the other criterion for mitigation), which coincidentally, are the same locations where existing noise levels exceed 66 dB. As such, the project will enable the mitigation of some existing study area noise conditions, that but for the project, would not be addressed. The goal of such mitigation is to reduce sound levels by 10 dB or more.

In presenting the proposed noise mitigation, Tom referred to a plan of Alternative 3 in Dover and noted that the proposed mitigation was the result of a rigorous assessment of design performance criteria including engineering, constructability, safety, acoustic performance, cost, land use and residents' opinions of the proposed noise barriers. With respect to Alternative 3, Tom stated that approximately 4,100 feet of noise barrier (14' in height) is recommended on the west side of the Turnpike (Noise Barrier #1) and approximately 4,200 feet (14' in height) of noise barrier is recommended for the east side of the Turnpike (Noise Barrier #2) extending north from the Little Bay Bridges to Exit 6. Tom next referred to another plan stating that noise barriers were being recommended for approximately 3,700 feet north of Exit 6, on both sides of the Turnpike. These barriers would range in height between 12 feet on the west side and 14 feet on the east side and extend beyond the Dover Toll plaza. He noted that the front row or those residences closest to the barrier receive more protection, but those residences located further away would still benefit. Tom concluded his presentation noting that no area in Newington met the noise mitigation criteria and that the lower Turnpike profile reflected in Alternative 13 would minimize noise. He also mentioned that NHDOT was researching the cost-effectiveness of "quiet pavement" design. General comments and questions followed.

Representative Brown asked if the proposed mitigation could be implemented. She stated that she supported the proposed noise mitigation plan and was encouraging her constituents to submit letters of support to the NHDOT. Chris Waszczuk responded that letters would be an appropriate way of expressing support, and that the NHDOT was committed to the noise mitigation plan as proposed. Dover City Councilor Matt Mayberry stated that the Dover City Council will support the entire mitigation plan (Noise Barriers #1, #2, #3 and #4) as proposed, and asked about the schedule for

implementation. Tom responded that every effort will be made to accelerate the schedule so that benefits would be realized both during and following construction. He added, however, right-of-way acquisition can always be an issue that will hopefully be resolved during final design. Councilor Mayberry inquired as to the determination of the height of the barriers. Tom Wholley responded that the height of the barrier reflects a cost-effectiveness analysis, and that the proposed height of the barrier will achieve a 10 dB reduction in noise to the closest abutters. Kevin Thompson, 86 Marsh Road, Dover, asked for a description of the 66 dB noise level criteria. Tom suggested imagining the noise of traffic passing by as one changes a flat tire on the side of a roadway. John Scruton, 99 Sixth Street, Dover, stated that some cars are quieter than others *vis-à-vis* engine, tire and exhaust noise. Tom concurred, noting that the sound barrier addresses engine, tire and exhaust noise, and that "quiet pavement" research could possibly address tire-related noise. Cheryl Mackey, 343 Dover Point Road, Dover, stated that it is so noisy today, she has to yell when speaking to someone in her backyard or on her deck. Tom responded that the proposed mitigation will provide a dramatic improvement, and the noise barrier will also block out the headlights from passing vehicles. Rich Sirois, 397 Dover Point road, inquired as to the appearance of sound barriers, and what types of barriers were under consideration. Tom replied that the typical barriers that are in place around the state are constructed of concrete bases and posts with wooden slats. Gordon Smith stated that the stops and starts at the Dover Toll Plaza are noisy. Tom replied that the proposed noise barriers will reduce that noise, as will the gravitation of more travelers to EZ Pass, which will reduce the portion of traffic that would need to stop at the plaza.

There being no further questions or comments on noise impacts and mitigation, Frank O'Callaghan introduced Pete Walker to summarize the wetland impacts and proposed mitigation. He began by noting the environmental sensitivity of the study area with respect to both tidal and freshwater wetlands, and stated the philosophy of avoiding impacts where possible, minimizing impacts where they are unavoidable, and mitigating for those unavoidable impacts. Pete noted that there were approximately 15.5 Ac of wetlands impacted in Newington (11.2 Ac) and Dover (4.30 Ac) as a direct result of the project. However, the project would mitigate for approximately 17.90 Ac of impacts, taking into account approximately 0.64 Ac of impact in Newington related to the Exit 4 Interim Safety Improvements project, approximately 0.4 Ac of impact related to the Exit 9 park-and-ride facility, and approximately 1.30 Ac of impact related to the NH 155 Bridge Replacement/Intersection Improvement project in Madbury. He summarized the regulatory framework, noting NHDES regulations and their preference for mitigating impacts within the same watershed, and federal ACOE regulations and their preference for wetlands restoration, noting that the Resource Agencies will determine the acceptability of the proposed mitigation package. General guidance is to keep mitigation appropriate to impacts. He reviewed the process of identifying up to 24 potential wetland mitigation parcels – review of published resources, development of a GIS database, consultations with local conservation commissions, the Nature Conservancy and state and federal resource agencies, and field review of potential sites. Following the summary of impacts, and background description of the regulatory framework and the process of identifying potential wetland mitigation parcels, Pete summarized the proposed wetland mitigation package as follows: restoration of Railway Brook in Newington, preservation and restoration of the Drive-In Theatre parcel in Newington, and preservation of 40 to 50 acres in the Blackwater Brook area of Dover. He noted that alternative mitigation elements have also been identified, including preservation of the Watson property in Newington, preservation of the Knight Brook area in Newington, and preservation at the Bellamy River west area in Dover.

Pete referred to a comparison of 1986 and 1956 USGS maps in Newington to demonstrate that the proposed restoration of Railway Brook would realign the brook into a more natural configuration, resembling its original configuration prior to construction of the Pease AFB. He noted that preservation and restoration of the Drive-In site abutted the Natural Resource Protection Zone of the Tradeport, and could be restored to support upland habitat. He concluded his presentation by

outlining the next steps in the wetlands mitigation process: meet with the resource agencies, follow-up with the local communities, develop a formal proposal in the DEIS, file an ACOE Individual Permit and prepare the FEIS.

At this point, Pete paused for questions and comments. A resident asked if there was a difference in definition between the terms "mitigation" and "compensation." Pete replied that the terms, in the context of wetland impacts and mitigation, were essentially the same. There being no additional wetland mitigation related questions or comments, Chris Waszczuk solicited general comments and questions on any project related issue, and/or follow-on comments and questions related to earlier elements of the evening's presentation. A resident asked if placing barriers on the Little Bay Bridges to prevent driver distraction and prevent accidents was being considered. Chris Waszczuk replied that placing barriers on the bridges was not under consideration at this time. A resident asked if navigational impacts resulting from bridge reconstruction have been considered in light of the strong currents in the channel. Chris responded that UNH has modeled the existing currents and current changes due to bridge reconstruction. It is expected that the existing cross turbulence between the LBB bridge piers will be reduced by connecting the LBB piers to the GSB piers. Sam Bittner, 346 Dover Point Road, expressed concern for pedestrians crossing US 4 at Spur Road assuming the existing traffic signals were removed. While a pedestrian overpass is not being considered, Chris Waszczuk replied that pedestrians could be accommodated along the connector road, either within the shoulder area or by means of a sidewalk, or a pedestrian signal, if warranted, could be retained at the Spur Road/US 4 intersection. Kevin Thompson asked if modifications to toll plaza operations would be required. Chris responded that future toll plaza operations have been reviewed and deemed satisfactory. Carole Cartnick, Boston Harbor Road, asked if the proposed sound barriers are guaranteed to be part of project implementation. Chris replied that the sound barriers, as proposed, are viewed as a project commitment. Councilor Mayberry inquired as to the proper process for requesting consideration of constructing a sidewalk along Dover Point Road. Chris replied that the City could either petition the NHDOT, or pursue a Transportation Enhancement project through the SRPC and Seacoast MPO.

Brian Greene, 393 Dover Point Road, asked what the maximum noise levels measured were during the 2003 inventory of existing conditions. Tom Wholley responded that measurements were recorded during the weekday morning, just following the AM peak hour, and during the afternoon, just prior to the PM peak hour to record the loudest hours. The highest noise level recorded was 69 dB, and the lowest level recorded was 54 dB. Tom noted that the sound barriers will provide a 10 dB reduction in noise, 24 hours a day.

Gordon Smith, Boston Harbor Road, suggested it was noisier in the AM than the PM. Tom responded that it was noisier in the AM on the southbound side of the Turnpike and noisier in the PM on the northbound side. This corresponds to the predominant commuter flow of traffic – heavier southbound in the AM and heavier northbound in the PM. Chris Waszczuk offered to measure noise at residential properties; he suggested that interested abutters contact the NHDOT. Gordon Smith asked if the NHDOT would monitor noise following the construction of improvements to see how accurate the estimate of noise levels was. Chris replied that future noise monitoring, post construction, could be done. Brian Greene asked about the difference in elevation between Spur Road and the Exit 6 overpass at the grade-separated connector road location. Chris Waszczuk replied that the difference in elevation was approximately 20 feet. Andrea Poliquin, 20 Wentworth Terrace, asked if Exit 5 could be maintained. Chris explained that providing the minimum geometric standards for the Exit 5 off-ramp (similar to the minimum standards employed at Shattuck Way, Exit 4 in Newington) would severely impact Hilton Park and Pomeroy Cove. The proximity of the Exit 5 on-ramp to the Exit 6 off-ramp, coupled with the increase in traffic, will not allow for safe and efficient traffic operating conditions. With respect to the location and operation of the local Dover Point/Hilton Park connector, Frank O'Callaghan added that going under the Turnpike in the vicinity

of Exit 5 required elevating the Turnpike with greater noise and visual impacts. Traversing over the Turnpike at this location resulted in substantial property impacts along Dover Point Road. The proposed 2-way traffic operation under the Turnpike adjacent to the channel reduced noise impacts and eliminated the visual impact. Frank noted the change in traffic patterns for Wentworth Terrace residents would be balanced by the reduction in noise levels. Louise Kelley, 31 Wentworth Terrace, acknowledged that the changes in traffic patterns were a little bit more circuitous, but acceptable from her perspective, given the fact that the pedestrian/bicycle path adjacent to Pomeroy Cover will be preserved, that Pomeroy Cove will not be disturbed, and that the sound barriers will be constructed. A final question pertained to the travel of bicyclists along the Exit 6 overpass. Chris Waszczuk replied that shoulders would be provided on the overpass, which could accommodate bicyclists.

There being no further questions or comments, the public informational meeting ended at 9:45 PM.

cc: J. Brillhart
C. Waszczuk
M. Dugas
M. Laurin
H. Goodwin (Bureau of Turnpikes)
B. O'Donnell (FHWA)
M. Joyal, Dover City Manager
Town of Newington Selectboard
Newington ATF

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATION MEETING (PIM) MEETING
DOVER CITY HALL
NOVEMBER 7, 2005

Name Richard Stein
Affiliation property owner
Address 516 Shattuck way
Newington NH

Phone /Email DOT250@aol 1603 431-9741

Name Spencer Struble
Affiliation Property Owners Husband
Address 316 C Dover Point Rd
Dover NH 03820

Phone /Email 742-9117 /sstruble@markem.com

Name Jennifer Brown
Affiliation State Rep - prop. owner
Address 9 Baldwin Way
Dover, NH

Phone /Email 743-0988 /jeni-b@comcast.net

Name Douglas DePorter
Affiliation NH DOT
Address PO 740
Durham NH

Phone /Email 1603 868 1133

Name Joanne Isom
Affiliation Property Owner
Address 6 Hilton Rd
Dover NH 03820

Phone /Email 749 4794

Name MICHAEL DUGAS
Affiliation NHDOT
Address CONCORD, NH

Phone /Email /

Name RICHARD D ISOM
Affiliation OWNER
Address 6 HILTON RD
DOVER NH

Phone /Email 749 14794

Name MARC LAURIN
Affiliation NH DOT
Address HAZEN DR
CONCORD, NH

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATION MEETING (PIM) MEETING
DOVER CITY HALL
NOVEMBER 7, 2005

Name Betty Lathrop
Affiliation
Address 393 Dover Pt Rd. Dover, NH
Phone /Email 742-8561 /

Name Cheryl Mackey / Sid Mackey
Affiliation
Address 343 Dover Pt Rd 339 Dover Pt Rd
Phone /Email 749-4191

Name BRIAN GREENE
Affiliation
Address 383 Dover Point Rd Dover NH.
Phone /Email 742-8861 /

Name Chris CROSS
Affiliation
Address 327 Nimble Hill Rd Newington
Phone /Email 427-2806 / ecross xx@Comcast.net

Name Jim REID
Affiliation
Address 300 Dover Pt Rd Dover NH
Phone /Email 749-2468

Name Louise Kelley
Affiliation
Address 31 Wentworth Terrace
Phone /Email 742 / 1880

Name DICK FERRARO
Affiliation
Address 67 CLEARWATER DR DOVER
Phone /Email 742-2856 /

Name BRUCE W. WOODRUFF
Affiliation CITY OF DOVER PLNG
Address CITY HALL
ATF MEMBER
Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATION MEETING (PIM) MEETING
DOVER CITY HALL
NOVEMBER 7, 2005

Name Dave White
Affiliation City of Dover
Address 5 Riverside Dr Dover

Phone /Email ____ / ____

Name ____
Affiliation ____
Address ____

Phone /Email ____ / ____

Name Kevin Thompson
Affiliation Commuter
Address 86 Knox Marsh Rd
Apt 1 Dover N.H. 03820

Phone /Email 603 749 / 1585

Name ____
Affiliation ____
Address ____

Phone /Email ____ / ____

Name Caroline L French
Affiliation ____
Address 23 Boston Harbor

Phone /Email 7019 6160 1

Name ____
Affiliation ____
Address ____

Phone /Email ____ / ____

Name JOHN SCRUTON
Affiliation ____
Address 99 SIXTH ST
DOVER NH

Phone /Email 603 742 2312

Name ____
Affiliation ____
Address ____

Phone /Email ____ / ____

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATION MEETING (PIM) MEETING
DOVER CITY HALL
NOVEMBER 7, 2005

Name Kenneth Appel
Affiliation
Address 16 Isaac Lucas C
Dover
Phone /Email 749-7344 / Renappel@comcast.net

Name CODY CARTWICK
Affiliation
Address 53 BOSTON HARBOR RD
DOVER
Phone /Email 742-8689 / CODYCARTWICK@AOL.COM

Name Jeremiah Poore
Affiliation Fosters Daily Democrat
Address
Phone /Email /

Name ANDY SWETT
Affiliation
Address 515 BOSTON HARBOR RD
Phone /Email /

Name Barbara Rushmore, Fred Stepanek
Affiliation
Address 191 Spur Road
Phone /Email 749.1151 / bjrush@comcast.net

Name RICK SIROIS
Affiliation
Address 397 DOVER POINT RD
Phone /Email /

Name Carole Cartrick
Affiliation
Address 53 Boston Harbor Road
Phone /Email 603 742-8689

Name Jan MacMillan / Gordon Smith
Affiliation
Address 14 Boston Harbor Rd
Phone /Email / Janniemac@comcast.net

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATION MEETING (PIM) MEETING
DOVER CITY HALL
NOVEMBER 7, 2005

Name PETER WALKER
Affiliation VHB
Address BEDFORD, NH

Phone /Email 644-0881 / pwalker@vhb.com

Name SANDRA & BILL SWEENEY
Affiliation Resident
Address 90 PATTERSON LANE
NEWINGTON, NH. 03801

Phone /Email 436-0592 / saswe@aol.com

Name Chris Williams
Affiliation NH Coastal Program
Address Portsmouth NH

Phone /Email 559-0025 / cwilliams@des.state.nh.us

Name Sam Bittner
Affiliation
Address 346 Dover Pt. Rd.
Dover, NH. 03820

Phone /Email 603-749-4351

Name RAY BARDWELL
Affiliation
Address 199 STAR ROAD
DOVER, NH

Phone /Email 603-749-6422

Name Ilean Bittner
Affiliation
Address 354 Dover Pt. Rd.
Dover, NH 03820

Phone /Email 603-742-7826

Name Bonnie Bittner
Affiliation
Address 346 Dover Pt. Rd.
Dover, NH. 03820

Phone /Email 603-749-1435

Name Andrea C. Polusuin
Affiliation Resident Exit 5
Address 20 Wentworth Terrace
Dover (Point)

a-graphic@comcast.net
Phone /Email 750/5115

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATION MEETING (PIM) MEETING
DOVER CITY HALL
NOVEMBER 7, 2005

Name Dan Campbell
Affiliation
Address 48 Main St.
Concord NH.
Phone /Email 603-748-1641 /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATION MEETING (PIM) MEETING
DOVER CITY HALL
NOVEMBER 7, 2005

Name Thomas Wholley
Affiliation VHB
Address P.O. Box 9151
Watertown, MA

Phone /Email 617 924 1770 / twholley@vhb.com

Name Irvin W. Nickerson
Affiliation Nickerson Realty
Address 228 Piscataqua Rd
Durham, NH 03824

Phone /Email /

Name CEO Bosse
Affiliation
Address 10A ROBERTS RD
DOVER, NH 03820

Phone /Email 603.742.8877

Name William F. O'Donnell
Affiliation Federal Highway Administration
Address Cornerstone Drive
Concord NH 03301

Phone /Email william.f.odonnell@fhwa.dot.gov

Name Robert L. Gifford
Affiliation Retired N.H.S.P.
Address 306A Dover Point Rd
Dover, NH 03820

Phone /Email 603-740-4615 / BJGifford@comcast.net

Name Matt Mayberry
Affiliation Dover City Council
Address 410 Dover Point Rd
Dover NH 03820

Phone /Email 603 516 0130 / Matt@dover-remax.com

Name Robert & Charlene Weed
Affiliation
Address 306 DOVER PT. Road
DOVER NH 03820

Phone /Email 603-742-2996

Name Tim Roache
Affiliation SRPC
Address 2 Ridge St
Dover NH 03820

Phone /Email 742-2523 / TROACHE@STRAFFORD.ORG

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

Kilton Road
Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110-6532
603 644-0888
FAX 603 644-2385

Meeting Notes

Attendees: Chris Waszczuk, NHDOT
Mike Dugas, NHDOT
Marc Laurin, NHDOT
Bill O'Donnell, FHWA
Joe Moyer, FHWA
Pete Walker, VHB
Tom Wholley, VHB
Frank O'Callaghan, VHB

Date/Time: November 9, 2005

Project No.: 51425.00

Place: Newington Town Hall

Re: Newington-Dover, 11238
Public Informational Meeting

Notes taken by: Frank O'Callaghan

Chris Waszczuk, NHDOT Project Manager, called the meeting to order at 7:07 PM. He welcomed those in attendance and requested those in attendance to sign-in. He noted that this evening's public information meeting was part of a substantial public outreach program; over the course of study there have been 15 Advisory Task Force meetings, 5 Public Information Meetings and 12 Resource Agency meetings to date. The project team, with input from the public, local, state and federal officials, has attempted to identify a preferred transportation improvement alternative for the Newington-Dover study area. Chris then introduced project team members Frank O'Callaghan, Pete Walker and Tom Wholley from VHB. He reviewed the meeting agenda noting that the project team was looking for input, and that there would be three (3) scheduled breaks in the approximately 90 minute presentation for public comment and questions. The presentation would include a description of a suggested preferred alternative.

Chris reviewed the project's purpose which is to reduce safety problems and improve transportation efficiency for an approximately 3.5 mile long section of the Spaulding Turnpike beginning at the Gosling Road Interchange (Exit 1) in Newington and extending across the Little Bay Bridges to a point just south of the toll plaza in Dover. Chris then reviewed the project need citing the importance of the Spaulding Turnpike from commuter, commerce, and tourist perspectives; its designation as part of the National Highway System (NHS); and its function as a limited access highway linking the seacoast region with I-95, Concord, the Lakes Region and the White Mountains. He cited the historic growth of traffic and future travel projections, the poor levels of traffic service, existing geometric constraints and deficiencies and the history of traffic accident experience. He noted that the incidence of traffic accidents is growing at a higher annual rate than the rate of traffic growth. He stated that the compactness of the 3.5 mile study area and short spacing between the six (6) interchanges within this section of the Turnpike constrain traffic operations, and exacerbate the impacts of a traffic accident, given the lack of suitable alternate routes to the Turnpike. Chris also noted that the Turnpike bisects local residential, recreational and commercial areas, and that there exists a need for local connectivity of motorists, pedestrians and bicyclists between the east and west sides of the Turnpike in both Newington and Dover. He stated that the Little Bay Bridges are major structures

located on an important highway in a moderate seismic area and were not designed to meet the current seismic criteria for this region. He noted that the Newington-Dover Spaulding Turnpike project was included in the State's Ten-Year Transportation Improvement Program and was the highest long-term transportation priority of the Seacoast Metropolitan Planning Organization. He stated that as the area continues to develop and traffic volumes increase, traffic operations and safety conditions would worsen. If nothing is done to improve the Turnpike, it is estimated that 2025 weekday periods of traffic congestion will lengthen to more than three times the duration of existing congested periods.

Chris then reviewed the five (5) phases of an Environmental Impact Statement (EIS) noting that the EIS is the highest order of study required by the National Environmental Policy Act (NEPA). The project Scoping Report, published in March 2004, summarizes the Phase 1 activities, which included the project's purpose and need statement, inventories of environmental resources, analysis of existing traffic conditions and projections of future travel demands, and the identification of the range of typical alternatives that would be considered. The Rationale Report, published in January 2005, and available on the project website, summarizes the development, screening and range of reasonable alternatives to be carried forward into Phase 3 of the study. Current Phase 3 activities include the detailed evaluation and impact analysis of alternatives, and the identification of a preferred alternative. At the conclusion of Phase 3 in February 2006, a draft Environmental Impact Statement (DEIS) will be published. A joint FHWA/ACOE/NHDES/NHDOT Public Hearing (Phase 4) on the Preferred Alternative is targeted for May 2006 and is a critical project milestone. Phase 5, which is scheduled for September 2006 – June 2007, will focus on finalizing the EIS by responding to comments on the Draft EIS and comments from the Public Hearing. The FHWA Record of Decision is another milestone (June 2007) which will allow final design and right-of-way acquisition to be initiated. Assuming the availability of funding and procurement of the necessary approvals and permits, construction could begin as early as fall of 2008 and would likely require five or six construction seasons.

Chris concluded his introductory remarks by noting the importance of public participation, and the openness of the process. He explained that a project Advisory Task Force – comprised of representatives of the municipalities of Newington, Dover, Portsmouth and Durham, the Rockingham and Strafford Regional Planning Commissions, COAST, the Pease Development Authority, the Great Bay Estuarine Research Reserve, and the Greater Dover and Portsmouth Chambers of Commerce, FHWA and NHDOT – has met 15 times during the course of the study and acts as a forum for communication, providing early and continuous input to the project team and feedback to their respective constituencies. In addition, five Public Information Meetings have been held to date during each phase of the project in both Dover and Newington locations to solicit input from abutters and public officials, and a project website, www.newington-dover.com, is maintained that provides a wealth of project related information such as reports, plans, meeting minutes, and frequently asked questions. The website is also another means of public input to the project team. Chris concluded by stating that the public participation process will culminate in the Public Hearing which will seek to garner approval for the layout. A special committee, comprised of three Executive Councilors, will oversee the Hearing and accept testimony, and the project team will address all comments.

At this point, Chris introduced Frank O'Callaghan to review the project background. Frank began by describing the project study area as extending north from Exit 1 (Gosling Road/Pease Boulevard) of the Turnpike on the south and traversing the Little Bay Bridges to a point just south of the Dover Toll Plaza and bounded by the Piscataqua River on the east and Little Bay on the west. He noted many study area resources and issues such as marine habitat, navigation, water quality, tidal and surface wetlands, floodplains, ground water, hazardous materials, visual resources, park and recreational activities, historic and cultural resources and potential residential and commercial property impacts.

He stated that air quality analyses have determined that the project will comply with state and federal air quality requirements. He noted that his colleague, Tom Wholley, would present findings on noise impacts and proposed noise mitigation later in the presentation. He also noted that direct and indirect and cumulative socio-economic impacts have been assessed for a 33-municipality study area. A draft report summarizing the analysis of direct, indirect and cumulative socio-economic impacts is currently being reviewed by state and federal resource agencies. He stated that the March 2004 Scoping Report summarized many of the inventories of environmental resources.

In summarizing safety conditions, Frank noted that study area traffic accidents during the 1998-2003 period totaled 1,119, and increased by approximately 55 percent in comparison to the previous 6-year, 1992-1997, period (719 total). During the 1998-2003 period, accidents increased at approximately 9.3 percent per year in comparison to the average annual traffic volume growth of approximately 2.4 percent per year. He also reviewed traffic volume growth where average daily traffic (ADT) volume on the bridges has increased from approximately 30,000 vehicles in 1980, to over 70,000 in 2003, and is projected to grow to over 94,000 vehicles per day by the year 2025. This 33 percent growth in traffic above 2003 levels will require the equivalent of four travel lanes in each direction across the Little Bay Bridges (LBB). He noted that current weekday peak hour capacity constraints extend from Exit 6 southbound to Exit 3 (Woodbury Avenue) in the morning, and from Exit 3 northbound through Exit 6 in the evening. These capacity conditions are compounded by a number of geometric deficiencies including substandard shoulder width on the Little Bay Bridges, substandard turning radii at many of the interchange on and off ramps, and inadequate weaving distances in both the northbound (Shattuck Way) and southbound (Nimble Hill Road) Exit 4N - Exit 4 area. As traffic volumes grow, the safety and traffic operational conditions, which are currently constrained, will worsen. For example, if the Turnpike is not improved, current weekday peak hour periods of congestion will double in the morning and more than triple in the evening by 2025.

Frank then presented some general bridge information for both the Little Bay Bridges and the General Sullivan Bridge (GSB). The Little Bay Bridges are characterized by substandard shoulder widths and 3.5 percent grades on a crest vertical curve, which restricts driver sight distance to a 60 mph design speed (design speed being the maximum safe operating speed governed by the vertical alignment or profile). The 2-lane bridges have minor deterioration and the substructure for both bridges – composed of reinforced concrete – was designed and constructed in 1966 prior to the current, more stringent seismic resistance requirements. Frank then enumerated several factors that would affect the rehabilitation alternatives for the General Sullivan Bridge. Four percent grades on a crest vertical curve that limits driver sight distance to a 45 mph design speed. The cross-section is limited to 24' between the curb lines and 2'-11" sidewalks on each side. In addition, the deck, girders and truss members exhibit major deterioration, and there is extensive substructure deterioration. The General Sullivan Bridge is also historic – being the second highest-ranking historic bridge in the state -- and subject to lead paint removal and re-painting.

At this point, Frank paused for questions and comments. Lulu Pickering, a Newington resident asked if the project had any historic impacts in Newington. Frank responded that potential impacts to the Isaac Dow House and Beane Farm located on Woodbury Avenue were minimized. He added that he would touch on this location during his presentation on the suggested preferred alternative. A second resident noted that she read in the newspaper that $20 million in federal funds had been secured by U.S. Senator Gregg to accelerate the project, yet the project schedule appears to have not been affected. Chris Waszczuk replied that the "earmarked" funds referred to in the newspapers are considered part of the Department's anticipated federal program funds and not additional federal funds. Chris noted that the goal from the onset of the study was to try to complete the documentation for the EIS, secure all the necessary permits and approvals, acquire the necessary right-of-way and design the project, for a construction start in the fall of 2008, should funding be available. Presently, funding is included in the draft 10-Year Plan beginning in 2010.

There being no further questions or comments, Frank proceeded to present the suggested preferred alternative. He noted that the suggested preferred alternative resulted from the analysis of impacts and evaluation of the range of reasonable alternatives that were carried forward from Phase 2 of the study, including the No-Build, Transportation System Management (TSM), Travel Demand Management (TDM), Bridge and Roadway/Interchange Improvements and combinations thereof. He began by focusing on the Little Bay Bridges (LBB), which are recommended to be rehabilitated and widened to four lanes in each direction. Frank stated that three general purpose lanes and one traffic management lane would be required between Exits 3 and 6, which would provide a satisfactory level of service (LOS D) beyond the 2025 design year. He noted that 3 lanes in each direction combined with the most aggressive combinations of travel demand management (TDM) would not provide a safe and adequate level of traffic service and would not meet the project purpose and need. The rehabilitation and widening of the LBB would hold the existing 60 mph design speed profile and the existing vertical clearance over the channel. The bridge piers would be seismically retrofitted, and the bridge construction would be completed in two phases so that two lanes of travel in each direction would be maintained at all times. Bridge widening would be to the west to avoid impacting Hilton Park and to minimize impacts to the bay. Frank noted that four lanes in each direction between Exits 3 and 6 would provide future flexibility for lane management beyond 2025. Preliminary cost estimates are approximately $55.5 million, which is approximately $38 million less than a new bridge would cost.

With respect to the General Sullivan Bridge (GSB), the project team is recommending rehabilitation to six-ton loading, which would support maintenance and emergency vehicles, and use by pedestrians and bicyclists, and for other recreation. Frank noted that the GSB is the second highest rated historic bridge in New Hampshire and is eligible for the National Register of Historic Places. It is a 4(f) resource and afforded protection under federal regulations; it provides an important pedestrian and bicycle system connection and is utilized for recreational activities. He stated that these uses would be more pleasurable on the GSB in comparison to the multi-use path alternative attached to the LBB. The GSB would also provide future flexibility and redundancy with respect to incident management and transit use. The approximate project cost of the GSB rehabilitation is $23 million, approximately $10 million more than its removal and replacement with a multi-use path, not including the additional cost of mitigation likely required should the GSB be removed (*i.e.*, if the GSB was removed, additional mitigation cost would be incurred which would reduce the $10 million cost differential between bridge rehabilitation and bridge removal). Frank stated that the FHWA, NHDHR, SRPC and City of Dover support bridge rehabilitation, and suggested that it would be difficult, from a 4(f) perspective, not to justify the expenditure of funds given the feasibility of reuse and net cost difference ($10 million) relative to total project cost (approximately $174 million).

Frank next described Alternative 3 in Dover, which provides a full service interchange at Exit 6, improving both system and local connectivity. He noted major characteristics including the closing of Exit 5 and the Cote Drive on-ramp, the diamond-type configuration for northbound travel, two-way traffic flow on the overpass, the grade-separated connector between Spur Road and Boston Harbor Road that eliminates the need for a traffic signal at the Spur Road/Boston Harbor Road intersection, a short on-ramp from the connector road to the southbound on-ramp which has the effect of maintaining the existing Boston Harbor Road ramp, and the local connector road adjacent to the channel linking both sides of Dover Point and Hilton Park. Frank paused and compared existing traffic patterns with changes resulting from Alternative 3. With respect to the local connector abutting the channel, he noted that the roadway would be designed for 20 mph, two-way traffic, and that 14'-6" vertical clearance would be provided for trucks and boats. The existing pedestrian and bicycle connection between both sides of Hilton Park would also be maintained. He pointed out that limiting the GSB to pedestrian and bicycle use allowed reconstructing the GSB approach for the local roadway connector and avoided impacting Hilton Park. An ADA-compliant ramp would be

constructed for bicycle and pedestrian access to the GSB. By locating the local roadway connector adjacent to the channel, the turnpike profile could be lowered which would reduce noise and visual impacts. Frank noted that two Dover Point Road businesses – K-9 Kaos and Adaptations, would be impacted, retaining walls on both sides of the Turnpike would be utilized to minimize impacts, and that the construction cost of Alternative 3 was approximately $44 million which included the LBB approach.

Frank then proceeded to describe Alternative 13 in Newington, which reconfigures Exit 3 (Woodbury Avenue) as a full service interchange with both off and on-ramps in both northbound and southbound directions. A roadway connection to the Tradeport is provided at Exit 3, and the Exit 4 off and on-ramps to Nimble Hill Road (southbound) and Shattuck Way (northbound) are maintained, as well as the two-way Shattuck Way extension to Nimble Hill Road, which is currently under construction as part of the Interim Safety Improvement project. Northbound Exit 2 would be closed with traffic re-routed through Exit 3. Alternative 13 allows for a future rail project to reconnect the Pease Spur and the Newington Branch Line by traversing above the Turnpike along the existing rail corridor. As part of the Newington-Dover project, it is recommended that the necessary right-of-way and easements be secured, a portion of the viaduct's pier foundation (located in the Turnpike's median) be constructed, and a memorandum of agreement between the NHDOT and PDA on future construction cost-sharing be secured. By carrying the rail connection over the Turnpike, the Turnpike's profile can be kept at its existing elevation, which reduces noise and visual impacts as compared to previous alternatives that had proposed to elevate the Turnpike over the rail corridor. The existing ExxonMobil facility would continue to operate at its current location via access from a new local connector road at its rear that would intersect Nimble Hill Road opposite Shattuck Way. The facility's existing driveway on Nimble Hill Road is proposed to be discontinued. Overall, local connections and Turnpike access are improved, and the service life of Exit 1 (Pease Boulevard/ Gosling Road) would be extended due to the additional access to the Tradeport provided at Exit 3. Frank noted that the Woodbury Avenue cross-section had been reduced to avoid impacting the historic Isaac Dow House and Beane Farm structures. Alternative 13 is estimated to cost approximately $47.3 million (which includes the LBB approach) and impact approximately 25 acres of Tradeport property.

Frank then addressed Transportation Systems Management (TSM) alternatives that are described as relatively low cost, short-term actions to improve existing safety and traffic operational conditions. He noted that improved directional signage at Exit 6, increased signage on the LBB approaches to remind drivers not to change lanes, and restriping of the shoulder area to increase the northbound Exit 6 deceleration lane to US 4 westbound had already been implemented. The Interim Safety Improvement Project at Exit 4 in Newington is under construction and will be completed in 2006. This project eliminates deficient traffic weaving conditions between Exits 4 and 4N, improves local traffic connections between Nimble Hill Road and Shattuck Way/Woodbury Avenue, and improves the northbound merge condition at Exit 3 for Woodbury Avenue traffic. The restriping of the Exit 6 southbound on-ramp to reduce the merge of traffic from two lanes to one is also recommended to improve traffic flow in the short term.

Frank next described the recommended Travel Demand Management (TDM) program of alternatives to reduce the level of peak period traffic within the study area, and to give seacoast area commuters more options as to how and when they travel. He noted that the TDM program encompassed new park-and-ride facilities, expanded bus service and rail service, and employer-based measures. With respect to park-and-ride, a new 416-space facility is currently under design at Exit 9 in Dover, and will be constructed in 2006 as a separate CMAQ-funded project. The facility will be serviced by the planned COAST express bus service (Rochester-Portsmouth), Dover's downtown transit loop service, and expanded commuter bus service proposed by C&J Trailways. A 200-space facility is recommended for the Exit 13 area in Rochester, and is envisioned to be implemented under a

separate CMAQ-funded project, and be coordinated with the Turnpike improvements currently being planned and designed for the Exit 13 area. A 50-space facility is also recommended for the US 4 corridor to be located in Lee in the vicinity of the US 4/NH 125 traffic circle and also funded under the CMAQ program as a future CMAQ project.

With respect to expanding bus service, Frank described three alternatives. Alternative 1 expands intercity service between Rochester, Portsmouth and Boston. C&J has filed a CMAQ application to extend service north to the proposed Exit 9 park-and-ride facility in Dover by providing 16 daily round trips from Portsmouth. This service would then be extended to Rochester by either C&J or another provider as soon as the Exit 13 park-and-ride facility is completed. The capital cost of extending the service to Rochester would range between $2 and $4 million, depending on the level of service and provider. Bus Alternative 2 involves adding a bus to the proposed COAST express bus service between Rochester and Portsmouth to reduce peak period headways. This service is programmed for 2006 and could be expanded as proposed for a capital cost of approximately $400 thousand, and funded via a CMAQ grant or through project funding. Bus Alternative 3 involves expanding local service on COAST Route 2 (Rochester-Portsmouth), Wildcat Transit Route 4 (Durham-Portsmouth) and the COAST Pease Trolley by reducing headways during peak periods. In addition to adding additional buses, an improved transfer point for these three routes would be developed in the vicinity of Exit 1 and the malls. The capital equipment and construction costs of Bus Alternative 3 is approximately $3.9 million.

From a rail perspective, Frank stated that NHDOT was supporting a joint MaineDOT/NHDOT CMAQ proposal to expand Downeaster service between Portland and Boston. Expanded service would add a fifth daily round trip between Portland and Boston, and improve the peak hour schedule of commuter service through New Hampshire by constructing sidings in Dover and Newfields and replacing approximately three miles of track in New Hampshire. The total cost of this proposal is approximately $6 million with the NHDOT CMAQ share approximately $1.2 million.

The final element of the recommended TDM program would be to extend the funding of Seacoast Commuter Options, the greater Portsmouth and seacoast region transportation management association (TMA), which promotes employer-based options to commuting alone such as ridesharing and transit. Frank closed his presentation by stating that the overall total cost of the suggested preferred alternative is approximately $174 million. He then paused for questions and comments.

A resident inquired as to traffic management during construction and length of construction. Frank replied that two lanes of traffic flow on the bridges would be maintained in each direction during construction and that construction would last approximately five to six years. The sequence of construction has not been finalized. Another resident inquired as to the location of construction staging areas. Chris Waszczuk responded that staging areas are typically identified during final design. Lulu Pickering, 339 Little Bay Road, asked if the old historic railroad station at Bloody Point would be subject to mitigation. Chris replied that if there were a need to mitigate historic-related impacts, Bloody Point would be an area to consider. However, neither the historic General Sullivan Bridge nor Hilton Park will be adversely impacted. As such, there is not a need to mitigate historic impacts at Bloody Point. Gail Pare, 188 Little Bay Road, stated that the rail depot was recently stabilized and inquired as to who funded that effort. Chris responded that he believed Turnpike funds might have been utilized for that effort. Jack Pare, 188 Little Bay Road, asked about the rationale for rehabilitating the GSB to a 6-ton load capacity. Chris replied that cost is a factor and the 6-ton load capacity would be adequate for pedestrian, bicycle, emergency vehicle and maintenance vehicle use, and noted that vehicular access would be limited to the Newington side (the Dover approach to the GSB is proposed to be reconfigured to accommodate the local connector roadway). Lulu Pickering asked if the sidewalk installed on Shattuck Way, which impacted Bloody Point, is part

of the Newington-Dover project. Chris replied that the sidewalk was installed as part of the Interim Safety Improvements project and was constructed within the NHDOT right-of-way; thus there was no impact to Bloody Point. Gail Pare noted that some shrubs that provided a visual buffer to Bloody Point have been removed as construction of the Interim Safety Improvements project has advanced. She asked if replanting is included in the extension of Shattuck Way. Chris responded that some plantings are planned for the west side, e.g., by Tricky's Cove.

There being no further questions or comments, Frank introduced Tom Wholley to discuss noise impacts and proposed mitigation. Tom reviewed the procedures, guidelines and criteria for conducting analyses and developing mitigation. He noted that noise level criteria for potential mitigation include 66 dB for residential land use, or an increase of 15 dB between existing and future conditions. Tom stated that 14 noise sensitive areas were identified and monitored during the noisiest hours of the day to determine existing noise levels, and to calibrate the FHWA Traffic Noise Model. Traffic model inputs reflect topography, traffic volumes and roadway features (such as profile), and allow the model to be used to compare existing noise conditions with future 2025 scenarios and various alternatives.

Tom noted that noise levels of 1 to 2 dB are barely perceptible, and that a change in noise of 10 dB is the equivalent of doubling the noise level. With respect to the comparison of future study area conditions to existing noise levels, impacts generally ranged between 2 to 6 dB, substantially less than the 15 dB criterion for requiring noise mitigation. However, some study area locations in Dover exceed 66 dB under future conditions (the other criterion for mitigation), which coincidentally, are the same locations where existing noise levels exceed 66 dB. As such, the project will enable the mitigation of some existing study area noise conditions, that but for the project, would not be addressed. The goal of such mitigation is to reduce sound levels by 10 dB or more.

In presenting the proposed noise mitigation, Tom referred to a plan of Alternative 3 in Dover and noted that the proposed mitigation was the result of a rigorous assessment of design performance criteria including engineering/constructability, safety, acoustic performance, cost, land use and residents' opinions of the proposed noise barriers. With respect to Alternative 3, Tom stated that approximately 4,100 feet of noise barrier (14' in height) is recommended on the west side of the Turnpike (Noise Barrier #1) and approximately 4,200 feet (14' in height) of noise barrier is recommended for the east side of the Turnpike (Noise Barrier #2) extending north from the Little Bay Bridges to Exit 6. Tom next referred to another plan stating that noise barriers were being recommended for approximately 3,700 feet north of Exit 6, on both sides of the Turnpike. These barriers would range in height between 12 feet on the west side and 14 feet on the east side and extend beyond the Dover Toll plaza. He noted that the front row or those residences closest to the barrier receive more protection, but those residences located further away would still benefit. Tom concluded his presentation noting that two potential areas in Newington – the church located on the east side of the Turnpike near Exit 2 and a residence on Shattuck Way – met noise level thresholds, but exceeded noise mitigation cost criteria of $30,000 or less per residence/receptor by a factor of ten. As such, no area in Newington met the noise mitigation criteria. He added that the lower Turnpike profile reflected in Alternative 13 would minimize noise. He also mentioned that NHDOT was researching the cost-effectiveness of "quiet pavement" design. General comments and questions followed.

Randy Watson, 271 Nimble Hill Road, Newington, asked if the bridges required barriers to lessen the impact of noise to nearby residences. Tom replied that the noise model considers how noise travels over water, and the analysis did not reflect a reduction in noise due to wind factors. Tom stated that residential areas were not impacted due to the proximity of the bridge area. While noise is perceptible in these areas, levels do not meet mitigation criteria. Jack Pare asked if soundproofing of

buildings, similar to FAA programs to address aircraft noise, is a possible noise mitigation alternative to sound barriers. Tom replied that soundproofing of buildings is the FAA's primary form of mitigation (for lack of other practicable alternatives), and is not available to FHWA as a means of noise mitigation. Gail Pare raised concern over the visual impact of the sound barriers to Turnpike travelers, and asked if existing buffer areas that are impacted to construct the sound barriers would be replanted to screen the barriers from one's view. Tom responded that during the design development process, 75 percent of the affected residents must support implementation of the sound barriers; assuming the necessary support, resident's input will be solicited during the process of designing the barrier and landscape aesthetics. The ultimate goal over time is for the barriers to become "invisible" or unnoticeable. Lorna Watson, 127 Fox Point Road, Newington, noted that she enjoys the view of Hilton Park from Shattuck Way, and the view of Pomeroy Cove from Dover Point. Such views could be affected by construction of the sound barriers. Tom replied that potential impact of view sheds would be assessed during the design process, assuming that 75 percent of the affected residents support implementation of the sound barriers. Assuming design and development of the sound barriers as proposed, effort would be made during the design process to minimize visual impacts without compromising the effectiveness of the noise mitigation. Lulu Pickering acknowledged that highway noise is substantial and noted that highway travelers will be subject to tunnel vision *vis-à-vis* the proposed sound barriers on both sides of the Turnpike. She asked if there are any alternatives to the proposed sound barriers. Tom Wholley responded that final highway alignment will affect both noise levels and visual impact, and that "quiet pavement" is being researched, which in some instances has reduced noise levels by approximately 4 to 5 dB. Tom encouraged attendees to participate in the design process and contact the NHDOT to express their interest in this issue and to affect future decisions related to the noise issue. Lulu noted that the recently repaved section of I-95, south of the NH-MA stateline, is markedly quieter than other sections of I-95 in New Hampshire.

Gail Pare asked Tom Wholley if he was up to date on the acoustics state-of-the-art. Tom responded in the affirmative, noting his participation in the Transportation Research Board, a national collaboration of state transportation officials, academics and practitioners who are at the forefront of highway related noise issues. A Newington resident inquired as to the Dover residents' reaction to the proposed sound barriers, as expressed at the previously held public informational meeting in Dover on November 7, 2005. Tom replied that the Dover residents and city officials expressed overwhelming support for the sound barriers, as proposed, and raised similar questions (as to this evening's meeting) *vis-à-vis* aesthetics. Richard Stern noted late night truck noise along Shattuck Way and its impact on nearby residents. Chris Waszczuk acknowledged that noise during off peak traffic times or quiet times is annoying, but does not meet the threshold warranting noise mitigation.

There being no further questions or comments on noise impacts and mitigation, Frank O'Callaghan introduced Pete Walker to summarize the wetland impacts and proposed mitigation. He began by noting the environmental sensitivity of the study area with respect to both tidal and freshwater wetlands, and stated the philosophy of avoiding impacts where possible, minimizing impacts where they are unavoidable, and mitigating for those unavoidable impacts. Pete noted that there were approximately 15.5 Ac of wetlands impacted in Newington (11.2 Ac) and Dover (4.30 Ac) as a direct result of the project. However, the project would mitigate for approximately 17.90 Ac of impacts, taking into account approximately 0.64 Ac of impact in Newington related to the Exit 4 Interim Safety Improvements project, approximately 0.4 Ac of impact related to the Exit 9 park-and-ride facility, and approximately 1.30 Ac of impact in Madbury related to the NH 155 Bridge Replacement/Intersection Improvement project in Madbury. He summarized the regulatory framework, noting NHDES regulations and their preference for mitigating impacts within the same watershed, and federal ACOE regulations and their preference for wetlands restoration, noting that the Resource Agencies will determine the acceptability of the proposed mitigation package. General guidance is to keep mitigation appropriate to impacts. He reviewed the process of identifying up to 24 potential wetland

mitigation parcels – review of published resources, development of a GIS database, consultations with local conservation commissions, the Nature Conservancy and state and federal resource agencies, and field review of potential sites. Following the summary of impacts, and background description of the regulatory framework and the process of identifying potential wetland mitigation parcels, Pete summarized the proposed wetland mitigation package as follows: restoration of Railway Brook in Newington, preservation and restoration of the Drive-In Theatre parcel in Newington, and preservation of 40 to 50 acres in the Blackwater Brook area of Dover. He noted that alternative mitigation elements have also been identified, including preservation of the Watson property in Newington, preservation of the Knight Brook area in Newington, and preservation at the Bellamy River west area in Dover.

Pete referred to a comparison of 1986 and 1956 USGS maps in Newington to demonstrate that the proposed restoration of Railway Brook would realign the brook into a more natural configuration, resembling its original configuration prior to construction of the Pease AFB. He noted that preservation and restoration of the Drive-In site abutted the Natural Resource Protection Zone of the Tradeport, and could be restored to support upland habitat such as the grasshopper sparrow. He concluded his presentation by outlining the next steps in the wetlands mitigation process: meet with the resource agencies, follow-up with the local communities, develop a formal proposal in the DEIS, file an ACOE Individual Permit and prepare the FEIS.

At this point, Chris Waszczuk opened the meeting to general questions and comments in addition to specific questions and comments relating to wetland impacts and proposed mitigation. He expressed hope that the design team, ATF and communities are headed on the right track in developing a smart transportation improvement solution for the Newington-Dover study area. Jim Noseworthy, Nimble Hill Road, noted the access to the ExxonMobil facility from the local cul-de-sac under Alternative 13, and asked if the cul-de-sac could be connected to the Turnpike, or if access to ExxonMobil could be provided to the southbound acceleration lane from Nimble Hill Road. Chris Waszczuk replied that site access directly from Nimble Hill Road where traffic is exiting the Turnpike, and site egress onto the Turnpike where traffic is accelerating from Nimble Hill Road present traffic operational and safety conditions inconsistent with state and federal design and operational standards. The reconfiguration of site access to the cul-de-sac addresses these concerns and maintains the facility's high visibility from the Turnpike. Lulu Pickering asked for explanation of the significance, if any, of the yellow border on properties depicted on the graphics related to the wetlands presentation. Pete Walker replied that the purpose of the yellow border was to draw attention or identify specific parcels that he referred to in his presentation. Chris Waszczuk added that highlighting specific parcels is helpful in the discussion of comparing potential preservation parcels with one another; it is necessary to be parcel-specific in one's comment and review. Lulu noted that the Turnpike bisects the Town and that this evening's meeting was the first identification and discussion of potential wetland mitigation parcels. She stated that her property has been identified as a potential wetlands mitigation (preservation) site, and she is disturbed that her property may be involuntarily taken by the state for mitigation purposes. Chris responded that intent of the mitigation would be to preserve land from further development, and the state would purchase the development rights. Lulu replied that some property owners might prefer to retain their property and development rights. Chris noted that the Department would consider owner's input in the identification of the final wetland mitigation package. Certainly, owners, whose parcels are identified for mitigation and are amenable to preserve their properties, would be given higher priority.

Gail Pare stated that her preference for wetlands mitigation would be the restoration of Railway Brook, as proposed. She asked if restoration of the brook would conflict with the existing railroad right-of-way. Pete replied that it would not. Gail also stated that she prefers preservation of designated prime wetlands. Pete responded that priority in preservation should be directed towards wetlands that are at risk of being developed or impacted by development, as opposed to wetlands –

such as designated prime wetlands – that cannot be infringed upon by future development. Gail raised the question of restoring the lower section of Railway Brook where it enters Tricky's Cove.

A resident inquired as to the location of the approximately 11 acres of wetland impacts in Newington. Pete replied that the impacts were distributed throughout the study corridor. Chris added that the impacts are identified on the plan of Alternative 13 by areas depicted in light green color; he noted that some are former drainage elements. Another resident asked if there was a formula or guidance for mitigation. Pete responded that there is no official "formula", but NHDES generally expects that for every one acre of impact, approximately 10 Ac of preservation, 1½ Ac of restoration, or 1½ Ac of wetland creation be offered as mitigation.

Lulu Pickering reiterated her dismay with the concept of linking the involuntary acquisition of private development rights to the mitigation of transportation improvements in locations such as Newington where land is so scarce. Pete replied that NHDOT is compelled to follow state and federal law, and adherence to such process should not be misinterpreted as the implementation of NHDOT policy. Pete stated that wetlands preservation is favored by the residents and officials of Dover. Preservation has not been the focus of mitigation in Newington; the recommended and preferred mitigation in Newington is wetland restoration, such as Railway Brook and the Drive-In site. Chris Waszczuk stated that the NHDOT will continue to solicit input from the Newington Officials and residents. A resident asked how landowners could stay informed with respect to the resolution of mitigation issues. Chris suggested that the Advisory Task Force Meetings (another meeting is planned for mid-January) and the Public Hearing, which is scheduled for May 2006, are effective forums. He noted that the project team is trying hard to balance impacts and make as many people as possible satisfied by the project and process. Gail Pare stated that the Newington Conservation Commission prefers restoration of Railway Brook and the Drive-In site. Finally, a resident asked if all owners within a potential preservation area would have to agree and support the proposal for the proposal to proceed. Pete Walker replied that individual parcels could potentially be acquired, depending on the particulars of the proposal.

There being no further questions or comments, the public informational meeting adjourned at 9:25 PM.

cc: J. Brillhart
C. Waszczuk
M. Dugas
M. Laurin
H. Goodwin (Bureau of Turnpikes)
B. O'Donnell (FHWA)
M. Joyal, Dover City Manager
Town of Newington Selectboard
Newington ATF

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATION MEETING (PIM) MEETING
NEWINGTON TOWN HALL
NOVEMBER 9, 2005

Name Jeff Ciccrello
Affiliation Louis Berger
Address 1001 Elm Street
Manchester, NH 03101

Phone /Email (603-644-5200) JCICERELLO@LOUISBERGER.COM

Name Steve Parkinson
Affiliation City of Portsmouth
Address 680 Peverly Hill Rd
Portsmouth, NH

Phone /Email 427/1530

Name Lorne Watson
Affiliation resident
Address 127 Fox Point Rd
Newington NH 03801

Phone /Email 603-436-2037

Name Lulu Pickering
Affiliation
Address 339 Little Bay Rd
Newington NH
03801

Phone /Email PICKERING@INFORMAGEN.COM

Name RANDY WATSON
Affiliation RESIDENT
Address 271 NIMBLE HILL RD
NEWINGTON, NH 03801

Phone /Email 603 427 5577

Name Noreen McCosker
Affiliation Beane Farm
Address 2299 Woodbury Ave
Newington NH 03801

Phone /Email 603/868-5070 NCMACCOUNTING@COMCAST.NET

Name Deborah Flanagan
Affiliation PSNH
Address 680 Peverly Hill Road

Phone /Email N/A

Name Joyce Mackey
Affiliation Resident
Address 412 Dover Point Rd
Dover, NH 03820

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATION MEETING (PIM) MEETING
NEWINGTON TOWN HALL
NOVEMBER 9, 2005

Name Chris CROSS
Affiliation Newington/Rockingham Planning
Address 327 Nobie Hill Road
Newington, NH
Phone /Email 427-7806 /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATION MEETING (PIM) MEETING
NEWINGTON TOWN HALL
NOVEMBER 9, 2005

Name Edward Wolford
Affiliation FHWA
Address 19 Chenell Dr. Ste 1
Concord, NH 03301
Phone /Email Edward.Wolford@FHWA.DOT.GOV

Name CHRIS TYMULA
Affiliation MHF DESIGN
Address 103 STILES RD
SALEM, NH 03079
Phone /Email 603 893 0720 /

Name DAVID WALKER
Affiliation RPC
Address 156 WATER STREET
EXETER, NH 03833
Phone /Email 778-0885 / dwalker@rpc-nh.org

Name Jack Pare
Affiliation Newington Planning Bd
Address 188 Little Bay Rd
Newington, NH 03801
Phone /Email /

Name [illegible] Noseworthy
Affiliation
Address Nimble Hill Rd
Newington NH
Phone /Email /

Name Gail Pare
Affiliation Newington - HDC
Address 188 Little Bay Rd
Newington, NH 03801
Phone /Email /

Name Leon Kenison
Affiliation PDA
Address 360 Corporate Dr.
Portsmouth
Phone /Email 766-9282 /
L.Kenison@pievadev.org

Name Suzanne Russell
Affiliation resident
Address 56 Nimble Hill Rd.
Newington, N.H. 03801
Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATION MEETING (PIM) MEETING
NEWINGTON TOWN HALL
NOVEMBER 9, 2005

Name Michael Goot
Affiliation Fosters Daily Democrat
Address 6 Market Square
Portsmouth, NH 03801

Phone /Email 431-4888 / mgoot@fosters.com

Name F.X. Bruton
Affiliation
Address 180 Locust St
Dover NH 03820

Phone /Email /

Name Dorothy M. Watson
Affiliation Newington Citizen
Address 133 Fox Point Rd
Newington, NH
03801

Phone /Email (603) 436-2037

Name David Mueller
Affiliation Newington Citizen
Address 5-7 Colonial Dr Newington
NH 03801

Phone /Email /

Name Martha Fuller Clark
Affiliation State Senator
Address District 24
6 152 Middle St
Portsmouth, NH
03801

Phone /Email martha.fuller clark
@leg.state.nh.us

Name Richard J. Sweeney
Affiliation Res. Newington
Address 241 Fox Pt. Rd

Phone /Email /

Name Dorene Stern
Affiliation resident abutter
Address 516 Shattuck Way
Newington NH 03801

Phone /Email / DOT25@aol.com

Name
Affiliation
Address

Phone /Email /

NEWINGTON-DOVER
NH 16 / US 4 / SPAULDING TURNPIKE IMPROVEMENTS (11238)
PUBLIC INFORMATION MEETING (PIM) MEETING
NEWINGTON TOWN HALL
NOVEMBER 9, 2005

Name Joe Moyer
Affiliation FHWA
Address 19 Chenell Drive Suite One
Concord NH 03301
Phone /Email (603) 228-3057 x102 / Joe.Moyer@fhwa.dot.gov

Name Peter Walker
Affiliation VHB
Address
Phone /Email /

Name Bill O'Donnell
Affiliation FHWA
Address Chenell Dr Concord NH
Phone /Email (603) 228-3057 x101

Name Emily Hanson
Affiliation Portsmouth Herald
Address
Phone /Email /

Name MARC LAURIN
Affiliation NHDOT
Address
Phone /Email /

Name RALPH SANDERS
Affiliation NH DOT
Address
Phone /Email /

Name MIKE DUGAS
Affiliation NHDOT
Address
Phone /Email /

Name
Affiliation
Address
Phone /Email /

Appendix C – Farmland Conversion Form

U.S. DEPARTMENT OF AGRICULTURE — Form AD-1006

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	1. Date of Land Evaluation Request: May 31, 2006	2. Sheet 1 of 2
3. Name of Project: Newington-Dover, NHS-027-1(37), 11238	4. Federal Agency Involved: Federal Highway Administration	
5. Proposed Land Use: Spaulding Turnpike Widening and Interchange Improvements	6. County and State: Rockingham County, NH	7. Type of Project: Corridor ☒ Other ☐

PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS: 2. 5/31/06	3. Person Completing the NRCS parts of this form: Katherine Swain
3. Does the site or corridor contain prime, unique, statewide or local important farmland? Yes ☒ No ☐ (If no, the FPPA does not apply - Do not complete additional parts of this form)	4. Acres Irrigated: -0-	5. Average Farm Size: acres 125 Ac.
6. Major Crop(s): corn silage, grass legume hay	7. Farmable Land in Government Jurisdiction: Acres: 349,686 % 75	8. Amount of Farmland As Defined in FPPA: Acres: 126,772 % 27
9. Name of Land Evaluation System Used: Rockingham Co.	10. Name of Local Site Assessment System: NA	11. Date Land Evaluation Returned by NRCS: 6/9/06

PART III *(To be completed by Federal Agency)*	Alternative Site Rating: Site A (Alt 10A)	Site B (Alt 12A)	Site C (Alt 13)	Site D
A. Total Acres To Be Converted Directly (i.e., for additional right-of-way acquisition)	3.60	9.23	2.69	
B. Total Acres To Be Converted Indirectly, Or To Receive Services	0	0	0	
C. Total Acres in Site (i.e., within corridor, 3.5 miles X approx. 1000 ft. wide)	424.2	424.2	424.2	
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime and Unique Farmland (all prime)	3.59	7.77	2.68	
B. Total Acres Statewide and Local Important Farmland	0.01	1.46	0.01	
C. Percentage of Farmland in County or Local Govt. Unit to be Converted	<0.0003	<0.0003	<0.0003	
D. Percentage of Farmland in Govt. Jurisdiction with Same or Higher Relative Value	% 77	% 77	77	
PART V *(To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland to be Serviced or Converted (Scale of 0 - 100 Points)*	1	2	1	

PART VI *(To be completed by Federal Agency) Corridor or Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b & c))*	Max. Points Corridor	Other	Site A (Alt 10A)	Site B (Alt 12A)	Site C (Alt 13)	Site D
1. Area in Nonurban Use	15	15	10	10	10	
2. Perimeter in Nonurban Use	10	10	5	5	5	
3. Percent of Site Being Farmed	20	20	5	5	5	
4. Protection Provided by State and Local Government	20	20	0	0	0	
5. Distance from Urban Built-up area	0	15	0	0	0	
6. Distance to Urban Support Services	0	15	0	0	0	
7. Size of Present Farm Unit Compared to Average	10	10	0	0	0	
8. Creation of Non-Farmable Farmland	25	10	0	0	0	
9. Availability of Farm Support Services	5	5	5	5	5	
10. On-Farm Investments	20	20	3	3	3	
11. Effects of Conversion on Farm Support Services	25	10	0	0	0	
12. Compatibility with Existing Agricultural Use	10	10	5	5	5	
TOTAL CORRIDOR OR SITE ASSESSMENT POINTS	160		33	33	33	
PART VII *(To be completed by Federal Agency)*						
Relative Value of Farmland (from Part V above)	100		1	2	1	
Total Corridor or Site Assessment (From Part VI above or a local site assessment)	160		33	33	33	
TOTAL POINTS *(Total of above 2 lines)*	260		34	35	34	

PART VIII *(To be completed by Federal Agency after final alternative is chosen)*

1. Corridor or Site Selected: Site A (Alt. 13, the Preferred Alternative). See page 2 for description.	2. Date of Selection:	3. Was A Local Site Assessment Used? Yes ☐ No ☒

4. Reason For Selection:

Site A – Alternative 13 provided the best compromise relative to avoidance of impacts to private property, while also minimizing any impacts to natural resources including important farmland soils.

Signature of person completing the Federal Agency parts of this form: (William J. Barry, Vanasse Hangen Brustlin, Inc.)	DATE 05/31/06 6/8/06

Definition of alternatives used in Part III:

For Newington roadway segment:

Site A = Alternative 10A
Site B = Alternative 12A.
Site C = Alternative 13 or the Preferred Alternative (i.e., compact interchange at Woodbury Ave. and no improvement along Patterson Lane to Shattuck Way)

Note: There are no important farmland soils affected in the two other roadway segments (i.e., the "Bridge" and "Dover" segments).

Appendix D – NEWILD Data

NEWILD COMPUTER PROGRAM SEARCH RESULTS

The NEWILD computer program (Thomasma et al. 1998) was used to compile lists of vertebrate species potentially utilizing habitats in the Newington-Dover Project corridor. The following habitats were searched:

1. Grass/Forb/Pasture
2. Shrub/Old Field
3. Orchard
4. Stream
5. Shallow Marsh
6. Sedge Meadow
7. Shrub Swamp
8. Riparian
9. Red Maple
10. White Pine/Red Oak/Red Maple
11. Northern Hardwoods
12. Structure, Building (Urban)

Seasonal Use Symbols:

B = Breeding season (amphibians and reptiles)
B = Breeding season (birds and mammals)
BF = Breeding and feeding (birds and mammals only)
N = Winter (amphibians and reptiles)
N = Winter (birds and mammals)
NF = Winter feeding (birds and mammals only)
On species list header, * = search restricted to preferred only

Utilized/Preferred symbols:

x = utilized habitat
+ = preferred habitat

Forest size class symbols:

S = Regeneration through seedlings
Sp = Saplings through poletimber
St = Sawtimber
L = Large sawtimber
U = Uneven-aged (Northern hardwoods only)
On habitat list, x =size class selections

New England Wildlife - search results

Search Summary

The search was done using 3 nonforested habitats

Number of amphibians:	0
Number of reptiles:	5
Number of birds:	31
Number of mammals:	8
TOTAL:	44

Number of species included in search: 338
Total number of species in NEWILD: 338

All seasons selected (preferred only)

Seasonal use symbols:

B = Breeding season (amphibians and reptiles)
B = Breeding season (birds and mammals)
BF = Breeding and feeding (birds and mammals only)
N = Winter (amphibians and reptiles)
N = Winter (birds and mammals)
NF = Winter feeding (birds and mammals only)
on species list header, * = search restricted to preferred only

Utilized/Preferred symbols:

x = utilized habitat
+ = preferred habitat

New England Wildlife - search results

A search was done using the following habitat components:

Nonforested habitats:

- Grass
- Forb
- Pasture

The following wildlife species were found:

	B*	BF*	N*	NF*
Spotted Turtle	+			
Red-eared Slider	+			
Eastern Hognose Snake	+			
Northern Black Racer	+			
Eastern Smooth Green Snake	+			
Turkey Vulture		+		
Broad-winged Hawk		+		
Red-tailed Hawk		+		
Rough-legged Hawk			+	+
American Kestrel	+	+	+	+
Gray Partridge	+	+	+	+
Ring-necked Pheasant	+	+		
Northern Bobwhite	+	+	+	+
Upland Sandpiper	+	+		
American Woodcock		+		
Horned Lark	+	+		
Northern Rough-winged Swallow		+		
Cliff Swallow		+		
Barn Swallow		+		
Brown Thrasher	+	+		
Northern Shrike			+	+
Common Yellowthroat	+	+		
Yellow-breasted Chat	+	+		
Indigo Bunting		+		
Field Sparrow	+	+	+	+
Vesper Sparrow	+	+		
Savannah Sparrow	+	+	+	+
Grasshopper Sparrow	+	+		
Henslow's Sparrow	+	+		
Song Sparrow	+	+	+	+
Bobolink	+	+		
Eastern Meadowlark	+	+	+	+
Common Redpoll			+	+

	B	BF	N	NF
Hoary Redpoll			+	+
Pine Siskin				+
American Goldfinch	+	+		
Least Shrew	+	+	+	+
Eastern Mole	+	+	+	+
Eastern Cottontail	+	+		
Woodchuck	+	+	+	
Meadow Vole	+	+	+	+
Woodland Vole	+	+	+	+
Meadow Jumping Mouse	+	+	+	
Red Fox		+		+

New England Wildlife - search results

Search Summary

The search was done using 1 nonforested habitat

Number of amphibians:	0
Number of reptiles:	1
Number of birds:	7
Number of mammals:	7
TOTAL:	15

Number of species included in search: 338
Total number of species in NEWILD: 338

All seasons selected (preferred only)

Seasonal use symbols:

B = Breeding season (amphibians and reptiles)
B = Breeding season (birds and mammals)
BF = Breeding and feeding (birds and mammals only)
N = Winter (amphibians and reptiles)
N = Winter (birds and mammals)
NF = Winter feeding (birds and mammals only)
on species list header, * = search restricted to preferred only

Utilized/Preferred symbols:

x = utilized habitat
+ = preferred habitat

New England Wildlife - search results

A search was done using the following habitat components:

Nonforested habitats:

Shrub / old field

The following wildlife species were found:

	B*	BF*	N*	NF*
Black Rat Snake	+			
Ring-necked Pheasant			+	+
Willow Flycatcher	+	+		
Northern Mockingbird	+			
Blue-winged Warbler	+	+		
Golden-winged Warbler	+	+		
Fox Sparrow			+	+
White-throated Sparrow			+	+
Eastern Cottontail	+	+	+	+
New England Cottontail	+	+		
Snowshoe Hare	+	+		
White-footed Mouse	+	+	+	+
Woodland Jumping Mouse	+	+	+	
Ermine	+	+	+	+
Striped Skunk			+	

New England Wildlife - search results

Search Summary

The search was done using 1 nonforested habitat

Number of amphibians:	0
Number of reptiles:	0
Number of birds:	5
Number of mammals:	5
TOTAL:	10

Number of species included in search: 338
Total number of species in NEWILD: 338

All seasons selected (preferred only)

Seasonal use symbols:

B = Breeding season (amphibians and reptiles)
B = Breeding season (birds and mammals)
BF = Breeding and feeding (birds and mammals only)
N = Winter (amphibians and reptiles)
N = Winter (birds and mammals)
NF = Winter feeding (birds and mammals only)
on species list header, * = search restricted to preferred only

Utilized/Preferred symbols:

x = utilized habitat
+ = preferred habitat

New England Wildlife - search results

A search was done using the following habitat components:

Nonforested habitats:

Orchard

The following wildlife species were found:

	B*	BF*	N*	NF*
Yellow-bellied Sapsucker			+	+
Eastern Kingbird	+	+		
White-breasted Nuthatch			+	+
Eastern Bluebird	+	+		
Orchard Oriole	+	+		
Eastern Cottontail	+	+		
Woodchuck	+	+	+	
Meadow Vole	+	+	+	+
Woodland Vole	+	+	+	+
Black Bear		+		

New England Wildlife - search results

Search Summary

The search was done using 1 nonforested habitat

Number of amphibians:	6
Number of reptiles:	2
Number of birds:	1
Number of mammals:	10
TOTAL:	19

Number of species included in search: 338
Total number of species in NEWILD: 338

All seasons selected (preferred only)

Seasonal use symbols:

B = Breeding season (amphibians and reptiles)
B = Breeding season (birds and mammals)
BF = Breeding and feeding (birds and mammals only)
N = Winter (amphibians and reptiles)
N = Winter (birds and mammals)
NF = Winter feeding (birds and mammals only)
on species list header, * = search restricted to preferred only

Utilized/Preferred symbols:

x = utilized habitat
+ = preferred habitat

New England Wildlife - search results

A search was done using the following habitat components:

Nonforested habitats:

Stream

The following wildlife species were found:

	B*	BF*	N*	NF*
Mudpuppy	+		+	
Northern Dusky Salamander	+			
Mountain Dusky Salamander	+			
Northern Spring Salamander	+			
Northern Two-lined Salamander	+			
Mink Frog	+			
Wood Turtle			+	
Eastern Ribbon Snake	+			
Spotted Sandpiper	+	+		
Water Shrew	+	+	+	+
Little Brown Myotis		+		
Keen's Myotis		+		
Silver-haired Bat		+		
Eastern Pipistrelle		+		
Big Brown Bat		+		
Beaver	+	+	+	+
Mink	+	+	+	+
River Otter	+	+	+	+
Moose		+		

New England Wildlife - search results

Search Summary

The search was done using 1 nonforested habitat

Number of amphibians:	2
Number of reptiles:	1
Number of birds:	21
Number of mammals:	13
TOTAL:	37

Number of species included in search: 338
Total number of species in NEWILD: 338

All seasons selected (preferred only)

Seasonal use symbols:

B = Breeding season (amphibians and reptiles)
B = Breeding season (birds and mammals)
BF = Breeding and feeding (birds and mammals only)
N = Winter (amphibians and reptiles)
N = Winter (birds and mammals)
NF = Winter feeding (birds and mammals only)
on species list header, * = search restricted to preferred only

Utilized/Preferred symbols:

x = utilized habitat
+ = preferred habitat

New England Wildlife - search results

A search was done using the following habitat components:

Nonforested habitats:

Shallow marsh

The following wildlife species were found:

	B*	BF*	N*	NF*
Northern Spring Peeper	+			
Northern Leopard Frog			+	
Spotted Turtle			+	
Pied-billed Grebe	+	+		
American Bittern	+	+		
Least Bittern	+	+		
Great Blue Heron	+	+		
Green-backed Heron	+	+		
Canada Goose	+	+		
Green-winged Teal	+	+		
American Black Duck	+	+	+	+
Mallard	+	+		
Blue-winged Teal	+	+		
Northern Shoveler	+	+		
Northern Harrier	+	+		
King Rail	+	+		
Virginia Rail	+	+	+	+
Sora	+	+		
Common Moorhen	+	+		
Black Tern	+	+		
Eastern Screech-Owl				+
Tree Swallow		+		
Red-winged Blackbird	+	+		
American Goldfinch	+	+		
Virginia Opossum		+		
Water Shrew	+	+	+	+
Little Brown Myotis		+		
Keen's Myotis		+		
Silver-haired Bat		+		
Eastern Pipistrelle		+		
Big Brown Bat		+		
Eastern Cottontail	+	+		
Muskrat	+	+	+	+
Southern Bog Lemming	+	+	+	+
Meadow Jumping Mouse	+	+		

	B	BF	N	NF
Raccoon		+		
Mink	+	+	+	+

New England Wildlife - search results

Search Summary

The search was done using 1 nonforested habitat

Number of amphibians:	1
Number of reptiles:	3
Number of birds:	2
Number of mammals:	8
TOTAL:	14

Number of species included in search: 338
Total number of species in NEWILD: 338

All seasons selected (preferred only)

Seasonal use symbols:

B = Breeding season (amphibians and reptiles)
B = Breeding season (birds and mammals)
BF = Breeding and feeding (birds and mammals only)
N = Winter (amphibians and reptiles)
N = Winter (birds and mammals)
NF = Winter feeding (birds and mammals only)
on species list header, * = search restricted to preferred only

Utilized/Preferred symbols:

x = utilized habitat
+ = preferred habitat

New England Wildlife - search results

A search was done using the following habitat components:

Nonforested habitats:

Sedge meadow

The following wildlife species were found:

	B*	BF*	N*	NF*
Northern Leopard Frog	+			
Spotted Turtle	+			
Bog Turtle	+			
Eastern Ribbon Snake	+			
Sedge Wren	+	+		
Henslow's Sparrow	+	+		
Virginia Opossum		+		
Water Shrew	+	+	+	+
Northern Short-tailed Shrew	+	+	+	+
Star-nosed Mole	+	+	+	+
Eastern Cottontail	+	+		
Southern Bog Lemming	+	+	+	+
Northern Bog Lemming	+	+	+	+
Meadow Jumping Mouse	+	+		

New England Wildlife - search results

Search Summary

The search was done using 1 nonforested habitat

Number of amphibians:	0
Number of reptiles:	0
Number of birds:	14
Number of mammals:	12
TOTAL:	26

Number of species included in search: 338
Total number of species in NEWILD: 338

All seasons selected (preferred only)

Seasonal use symbols:

B = Breeding season (amphibians and reptiles)
B = Breeding season (birds and mammals)
BF = Breeding and feeding (birds and mammals only)
N = Winter (amphibians and reptiles)
N = Winter (birds and mammals)
NF = Winter feeding (birds and mammals only)
on species list header, * = search restricted to preferred only

Utilized/Preferred symbols:

x = utilized habitat
+ = preferred habitat

New England Wildlife - search results

A search was done using the following habitat components:

Nonforested habitats:

Shrub swamp

The following wildlife species were found:

	B*	BF*	N*	NF*
Black-crowned Night-Heron	+			
Yellow-crowned Night-Heron	+			
Glossy Ibis	+			
Red-shouldered Hawk		+		
Common Snipe	+	+	+	+
Yellow-bellied Flycatcher	+	+		
Alder Flycatcher	+	+		
White-eyed Vireo	+	+		
Common Yellowthroat	+	+		
Hooded Warbler	+	+		
Song Sparrow	+	+		
Swamp Sparrow	+	+		
Common Grackle	+	+		
American Goldfinch	+	+		
Virginia Opossum		+		
Water Shrew	+	+	+	+
Little Brown Myotis		+		
Keen's Myotis		+		
Silver-haired Bat		+		
Eastern Pipistrelle		+		
Big Brown Bat		+		
Eastern Cottontail	+	+		
New England Cottontail	+	+	+	+
Snowshoe Hare	+	+		
Raccoon		+		
Lynx		+	+	+

New England Wildlife - search results

Search Summary

The search was done using 1 nonforested habitat

Number of amphibians:	4
Number of reptiles:	5
Number of birds:	21
Number of mammals:	13
TOTAL:	43

Number of species included in search: 338
Total number of species in NEWILD: 338

All seasons selected (preferred only)

Seasonal use symbols:

B = Breeding season (amphibians and reptiles)
B = Breeding season (birds and mammals)
BF = Breeding and feeding (birds and mammals only)
N = Winter (amphibians and reptiles)
N = Winter (birds and mammals)
NF = Winter feeding (birds and mammals only)
on species list header, * = search restricted to preferred only

Utilized/Preferred symbols:

x = utilized habitat
+ = preferred habitat

New England Wildlife - search results

A search was done using the following habitat components:

Nonforested habitats:

Riparian

The following wildlife species were found:

	B*	BF*	N*	NF*
Jefferson Salamander			+	
Mountain Dusky Salamander	+			
Northern Two-lined Salamander	+		+	
Green Frog	+			
Midland Painted Turtle	+			
Blanding's Turtle	+			
Eastern Spiny Softshell	+			
Eastern Ribbon Snake	+			
Eastern Worm Snake	+			
Wood Duck	+	+		
Red-shouldered Hawk	+	+	+	+
Eastern Screech-Owl	+	+	+	+
Barred Owl	+	+	+	+
Belted Kingfisher		+	+	+
Red-bellied Woodpecker	+	+	+	+
Eastern Wood-Pewee	+	+		
Alder Flycatcher	+	+		
Northern Rough-winged Swallow	+	+		
Tufted Titmouse	+	+	+	+
Veery	+	+		
Gray Catbird	+	+		
Yellow Warbler	+	+		
Cerulean Warbler	+	+		
Prothonotary Warbler	+	+		
Northern Waterthrush	+	+		
Louisiana Waterthrush	+	+		
Common Yellowthroat	+	+		
Yellow-breasted Chat	+	+		
Song Sparrow	+	+		
American Goldfinch			+	+
Virginia Opossum	+	+		
Northern Short-tailed Shrew	+	+	+	+
Little Brown Myotis		+		
Keen's Myotis		+		
Silver-haired Bat		+		

	B	BF	N	NF
Eastern Pipistrelle		+		
Big Brown Bat		+		
Beaver	+	+	+	+
Raccoon		+		
Long-tailed Weasel	+	+	+	+
Mink	+	+	+	+
River Otter	+	+	+	+
Moose		+		

New England Wildlife - search results

Search Summary

The search was done using 4 forested habitats

Number of amphibians:	7
Number of reptiles:	3
Number of birds:	49
Number of mammals:	11
TOTAL:	70

Number of species included in search: 338
Total number of species in NEWILD: 338

All seasons selected (preferred only)

Seasonal use symbols:

B = Breeding season (amphibians and reptiles)
B = Breeding season (birds and mammals)
BF = Breeding and feeding (birds and mammals only)
N = Winter (amphibians and reptiles)
N = Winter (birds and mammals)
NF = Winter feeding (birds and mammals only)
on species list header, * = search restricted to preferred only

Utilized/Preferred symbols:

x = utilized habitat
+ = preferred habitat

Forest size class symbols:

S = Regeneration through seedlings
Sp = Saplings through poletimber
St = Sawtimber
L = Large sawtimber
U = Uneven-aged (Northern hardwoods only)
on habitat list, x = size class selections

New England Wildlife - search results

A search was done using the following habitat components:

Forested habitats (all seasons selected - preferred only)	S	Sp	St	L	U
Red maple	x	x	x	x	

The following wildlife species were found:

	B*	BF*	N*	NF*
Marbled Salamander	+			
Jefferson Salamander	+			
Spotted Salamander	+			
Mountain Dusky Salamander	+			
Slimy Salamander	+			
Four-toed Salamander	+			
Northern Spring Salamander	+			
Five-lined Skink	+			
Eastern Ribbon Snake	+			
Northern Ringneck Snake	+			
Great Blue Heron	+			
Green-backed Heron	+			
Wood Duck	+			
Common Goldeneye	+			
Hooded Merganser	+			
Common Merganser	+			
Red-shouldered Hawk	+	+		
Broad-winged Hawk	+			
Red-tailed Hawk		+		+
American Woodcock	+			
Eastern Screech-Owl	+	+	+	+
Great Horned Owl	+			
Barred Owl	+	+	+	+
Great Gray Owl			+	+
Northern Saw-whet Owl	+	+	+	+
Ruby-throated Hummingbird	+	+		
Red-headed Woodpecker	+	+	+	+
Red-bellied Woodpecker	+	+	+	+
Downy Woodpecker	+	+	+	+
Hairy Woodpecker	+	+	+	+
Pileated Woodpecker	+	+	+	+
Alder Flycatcher	+	+		
Least Flycatcher	+	+		
Tree Swallow	+	+		
Blue Jay	+			

	B	BF	N	NF
Black-capped Chickadee	+	+	+	+
Carolina Wren	+	+	+	+
Winter Wren	+	+		
Blue-gray Gnatcatcher	+	+		
Veery	+	+		
Gray Catbird	+	+		
Northern Mockingbird	+	+	+	+
Cedar Waxwing	+	+	+	+
White-eyed Vireo	+	+		
Yellow-throated Vireo	+	+		
Warbling Vireo	+	+		
Yellow Warbler	+	+		
Chestnut-sided Warbler	+	+		
Yellow-rumped Warbler	+	+		
Prothonotary Warbler	+	+		
Northern Waterthrush	+	+		
Louisiana Waterthrush	+	+		
Mourning Warbler	+	+		
Common Yellowthroat	+	+		
Hooded Warbler	+	+		
Northern Cardinal	+	+	+	+
Song Sparrow	+	+	+	+
Common Grackle	+	+		
American Goldfinch	+	+	+	+
Virginia Opossum	+	+	+	+
New England Cottontail			+	+
Beaver		+		+
Woodland Jumping Mouse	+	+	+	
Red Fox	+	+	+	+
Gray Fox	+	+	+	+
Black Bear	+	+		
Raccoon	+	+	+	+
Mink	+	+	+	+
Lynx		+	+	+
Moose		+	+	+

New England Wildlife - search results

Search Summary

The search was done using 3 forested habitats

Number of amphibians:	0
Number of reptiles:	7
Number of birds:	35
Number of mammals:	8
TOTAL:	50

Number of species included in search: 338
Total number of species in NEWILD: 338

All seasons selected (preferred only)

Seasonal use symbols:

B = Breeding season (amphibians and reptiles)
B = Breeding season (birds and mammals)
BF = Breeding and feeding (birds and mammals only)
N = Winter (amphibians and reptiles)
N = Winter (birds and mammals)
NF = Winter feeding (birds and mammals only)
on species list header, * = search restricted to preferred only

Utilized/Preferred symbols:

x = utilized habitat
+ = preferred habitat

Forest size class symbols:

S = Regeneration through seedlings
Sp = Saplings through poletimber
St = Sawtimber
L = Large sawtimber
U = Uneven-aged (Northern hardwoods only)
on habitat list, x = size class selections

New England Wildlife - search results

A search was done using the following habitat components:

Forested habitats (all seasons selected - preferred only)	Sp	St	L	U
White pine / Red oak / Red maple	x	x	x	

The following wildlife species were found:

	B*	BF*	N*	NF*
Eastern Box Turtle	+			
Northern Redbelly Snake	+			
Eastern Hognose Snake	+			
Eastern Worm Snake	+			
Northern Black Racer	+			
Black Rat Snake	+			
Northern Copperhead	+			
Turkey Vulture	+			
Sharp-shinned Hawk	+	+	+	+
Cooper's Hawk	+	+	+	+
Broad-winged Hawk	+			
Red-tailed Hawk	+			
Wild Turkey	+		+	+
Northern Bobwhite			+	+
Mourning Dove	+			
Black-billed Cuckoo	+	+		
Yellow-billed Cuckoo	+	+		
Barred Owl	+	+	+	+
Northern Saw-whet Owl			+	
Whip-poor-will	+	+		
Red-headed Woodpecker	+	+	+	+
Red-bellied Woodpecker	+	+	+	+
Downy Woodpecker	+	+	+	+
Northern Flicker	+			
Pileated Woodpecker	+	+	+	+
Least Flycatcher	+	+		
Blue Jay	+	+	+	+
American Crow	+			
Tufted Titmouse	+	+	+	+
White-breasted Nuthatch	+	+	+	+
Blue-gray Gnatcatcher	+	+		
Hermit Thrush			+	+
Wood Thrush	+	+		
Yellow-throated Vireo	+	+		
Cerulean Warbler	+	+		

	B	BF	N	NF
Black-and-white Warbler	+	+		
Worm-eating Warbler	+	+		
Ovenbird	+	+		
Common Yellowthroat	+	+		
Scarlet Tanager	+	+		
Rose-breasted Grosbeak	+	+		
Rufous-sided Towhee	+	+		
Virginia Opossum			+	
Gray Squirrel	+	+	+	+
Southern Flying Squirrel	+	+	+	+
Northern Flying Squirrel	+	+	+	+
White-footed Mouse	+	+	+	+
Southern Red-backed Vole	+	+	+	+
Gray Fox	+	+	+	+
Black Bear	+	+		

New England Wildlife - search results

Search Summary

The search was done using 3 forested habitats

Number of amphibians:	0
Number of reptiles:	1
Number of birds:	30
Number of mammals:	10
TOTAL:	41

Number of species included in search: 338
Total number of species in NEWILD: 338

All seasons selected (preferred only)

Seasonal use symbols:

B = Breeding season (amphibians and reptiles)
B = Breeding season (birds and mammals)
BF = Breeding and feeding (birds and mammals only)
N = Winter (amphibians and reptiles)
N = Winter (birds and mammals)
NF = Winter feeding (birds and mammals only)
on species list header, * = search restricted to preferred only

Utilized/Preferred symbols:

x = utilized habitat
+ = preferred habitat

Forest size class symbols:

S = Regeneration through seedlings
Sp = Saplings through poletimber
St = Sawtimber
L = Large sawtimber
U = Uneven-aged (Northern hardwoods only)
on habitat list, x = size class selections

New England Wildlife - search results

A search was done using the following habitat components:

Forested habitats (all seasons selected - preferred only)	Sp	St	L	U
Northern hardwoods	x	x	x	

The following wildlife species were found:

	B*	BF*	N*	NF*
Northern Redbelly Snake	+			
Common Goldeneye	+			
Hooded Merganser	+			
Common Merganser	+			
Sharp-shinned Hawk	+	+	+	+
Northern Goshawk	+	+		
Broad-winged Hawk	+			
Wild Turkey			+	+
American Woodcock	+			
Barred Owl	+	+	+	+
Northern Saw-whet Owl	+		+	
Whip-poor-will	+	+		
Ruby-throated Hummingbird	+	+		
Downy Woodpecker	+	+	+	+
Hairy Woodpecker	+	+	+	+
Pileated Woodpecker	+	+	+	+
Least Flycatcher	+	+		
Blue Jay	+			
Black-capped Chickadee	+	+	+	+
White-breasted Nuthatch	+	+	+	+
Veery	+	+		
Wood Thrush	+	+		
Red-eyed Vireo	+	+		
Northern Parula	+	+		
Black-throated Blue Warbler	+	+		
Black-throated Green Warbler	+	+		
Black-and-white Warbler	+	+		
American Redstart	+	+		
Ovenbird	+	+		
Scarlet Tanager	+	+		
Rose-breasted Grosbeak	+	+		
Smoky Shrew	+	+	+	+
Southern Flying Squirrel	+	+	+	+
Northern Flying Squirrel	+	+	+	+
White-footed Mouse	+	+	+	+

	B	BF	N	NF
Southern Red-backed Vole	+	+	+	+
Woodland Jumping Mouse	+	+	+	
Porcupine	+	+	+	+
Gray Fox	+	+	+	+
Black Bear	+	+		
Fisher	+	+	+	+

New England Wildlife - search results

Search Summary

The search was done using 1 nonforested habitat

Number of amphibians:	0
Number of reptiles:	1
Number of birds:	5
Number of mammals:	8
TOTAL:	14

Number of species included in search: 338
Total number of species in NEWILD: 338

All seasons selected (preferred only)

Seasonal use symbols:

B = Breeding season (amphibians and reptiles)
B = Breeding season (birds and mammals)
BF = Breeding and feeding (birds and mammals only)
N = Winter (amphibians and reptiles)
N = Winter (birds and mammals)
NF = Winter feeding (birds and mammals only)
on species list header, * = search restricted to preferred only

Utilized/Preferred symbols:

x = utilized habitat
+ = preferred habitat

New England Wildlife - search results

A search was done using the following habitat components:

Nonforested habitats:

Structure, building

The following wildlife species were found:

	B*	BF*	N*	NF*
Eastern Milk Snake	+		+	
Rock Dove	+		+	
Chimney Swift	+			
Eastern Phoebe	+			
Cliff Swallow	+			
Barn Swallow	+			
Little Brown Myotis	+			
Keen's Myotis	+			
Silver-haired Bat	+			
Eastern Pipistrelle	+			
Big Brown Bat	+			
Deer Mouse	+	+	+	+
Norway Rat	+	+	+	+
House Mouse	+	+	+	+

Appendix E – Rare Species Coordination

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087

RE: Spaulding Turnpike Improvements
Newington - Dover, New Hampshire

July 23, 2003

Peter J. Walker
Director, Environmental Services
Vanasse Hangen Brustlin, Inc.
Kilton Road
Six Bedford Farms, Suite 607
Bedford, NH 03110-6532

RECEIVED
JUL 2 5 2003
VHB, Inc.

Dear Mr. Walker:

I have reviewed your request for information on endangered and threatened species and their habitats for the above-referenced project. My comments are provided in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

I have searched our database and found that the federally-threatened bald eagle (*Haliaeetus leucocephalus*) is the only species of state and federal concern at the site proposed for the Spaulding Turnpike improvements. The bald eagle currently uses the Great Bay area as a wintering habitat. Annual reports on bald eagles wintering in New Hampshire are prepared by the NH Audubon Society for the Nongame, Threatened and Endangered Species Program of the NH Department of Fish and Game. Contact the Audubon Society or the NH Department of Fish and Game for a copy of the most recent report.

The New England cottontail (*Sylvilagus transitionalis*) was once widespread in New England and occurred throughout New Hampshire south of the White Mountains. For habitat, it requires the dense cover of regenerating forests, beaver flowages or shrub thickets, where both food and dense cover are found in close proximity. The New England cottontail is presently known to occur in several towns in Strafford County (J. Litvaitis et al. 2002, Interim Progress Report for a Regional Inventory of New England Cottontails, UNH Durham). The U.S. Fish and Wildlife Service is presently preparing a 90-day petition finding for this species and anticipates that a 12-month status review will be required to fully evaluate its candidacy for the endangered species list.

We have currently contracted with the University of New Hampshire to conduct range-wide occurrence surveys for this mammal. However, it is not possible for this survey effort to detect every habitat patch occupied by the species. In light of the above, we strongly recommend that the presence of potentially suitable habitat at the site be evaluated to determine the advisability of conducting presence/absence surveys for the New England cottontail.

Thank you for your cooperation and please contact me at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Michael Amaral
Endangered Species Specialist
New England Field Office

NH NATURAL HERITAGE BUREAU

Basic information about NH Natural Heritage Bureau environmental reviews*:

What is in our database: Locations where rare species (plants and animals) or examplary natural communities have been observed. We keep records on: federally listed species; species state-listed as Threatened or Endangered; species judged by experts to be at risk of becoming Threatened in New Hampshire, and natural communities that are of a rare type and/or are sufficiently large and undisturbed to be considered exemplary.

We do not attempt to map the full habitat required to support a rare species. Therefore, areas around a mapped point may be equally or more important than the point itself.

What we report in a review: For all plants and natural communities in our database, we report any recently observed record (seen in the last 20-30 years) that in our judgement, based primarily on proximity and local hydrology, *could* be affected by the project. We may also include older records so that if a field survey is done, the surveyor could be alert for all species once documented in the area. For animals, we simply report all recent records within one mile of the project and cc the report to NH Fish & Game, which has legal responsibility for animals in New Hampshire.

What to do when a review reports rare species or exemplary natural communities near a project:

- For animals, the applicant should request an evaluation from the NH Fish & Game Department.
- For plants and natural communities, the applicant and/or the the agency that required the review should evaluate the project for possible impacts, using the specific location and other information provided by NH Natural Heritage.

We are not a regulatory agency and our staff have ecological, not engineering, expertise. We provide information on known occurrences of rare species or exemplary natural communities near a project, but it is not our role to say whether the project will or will not impact those occurrences, or to require changes to a proposed project.

An expert who is familiar with the details of the project can usually quickly determine that most "hits" that we report are not at risk, e.g., if there will be no construction nearby and no water flows from the project in their direction.

When expert review indicates that there *are* concerns with a plant or natural community occurrence, we encourage you to call us at (603) 261-3623 to see if more information about the species or natural community is available. We have no funding for field visits or for extensive consultation with our ecologists, but we may have more site-specific information in our hard-copy files, and we can usually provide some ecological advice.

RECEIVED
JUL 1 4 2003
VHB, Inc.

*This document is being sent *once* to each person who gets a positive response for an environmental review.

Memo

NH Natural Heritage Bureau

To: Peter Walker, Vanasse Hangen Brustlin Inc
Kilton Rd
Six Bedford Farms Ste 607
Bedford NH 03110-6532

From: Sara Cairns, NH Natural Heritage Bureau

Date: 7/10/2003

Re: Review by NH Natural Heritage Bureau of request dated 7/1/2003
NHB File ID: 2669
Project type: Road improvement
Town: Newington, Dover
Location: Spaulding Turnpike, north of Exit 1 to north of Exit 6.

cc: John Kanter

I have searched our database for records of rare species and exemplary natural communities near the area identified in your request, with the following results. A species not listed by the state or the federal govenment as Threatened (T) or Endangered (E) has either been identified as a species of special concern in NH (W), or is rare enough in the state to be tracked by NH Heritage even though it has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Natural Community	State	Federal	Notes
SNE Acidic Seepage Swamp	-	-	These swamps are influenced by groundwater seepage and springs which moderate water fluctuations and maintain conditions favorable for the accumulation of organic matter. The primary threats are changes to the hydrology of the wetland complex, particularly raising or lowering the water levels, and increased nutrient and pollutant input carried in by stormwater runoff.
SNE Calcareous Seepage Swamp	-	-	The primary threats to this natural community are changes to the hydrology of the wetland and increased nutrient and pollutant input from stormwater runoff. Construction activity in and repeated traffic through the wetland could also deleteriously affect its sensitive vegetation.

Plant species	State	Federal	Notes
Bulbous Bitter-Cress (*Cardamine bulbosa*)	E	-	This species occurs in forested swamps, low floodplain forest, and moist thickets.. Threats to the plants include canopy removal and destruction (draining) of its habitat.
Prolific Knotweed (*Polygonum prolificum*)*	T	-	Threats to estuarine plants are primarily alterations to the hydrology of the wetland, such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat, activities that eliminate plants, and increased input of nutrients and pollutants in storm runoff.

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-3623 fax: 271-6488

DRED/NHB
PO Box 1856
Concord NH 03302-1856

Memo

NH NATURAL HERITAGE BUREAU

Plant species (cont.)	State	Federal	Notes
Small Spike-Rush (*Eleocharis parvula*)	T	-	Threats are primarily alterations to the hydrology of the wetland, such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat, activities that eliminate plants, and increased input of nutrients and pollutants in storm runoff.

Vertebrate species	State	Federal	Notes
Common Tern (*Sterna hirundo*)	E	-	Contact John Kanter, NH Fish & Game Dept, at (603) 271-2462. NH F&G has legal authority over animals in New Hampshire.
Grasshopper Sparrow (*Ammodramus savannarum*)	T	-	
Henslow's Sparrow (*Ammodramus henslowii*)	W	-	

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. For some purposes, including legal requirements for state wetland permits, the fact that no species of concern are known to be present is sufficient. However, an on-site survey would provide better information on what species and communities are indeed present.

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-3623 fax: 271-6488

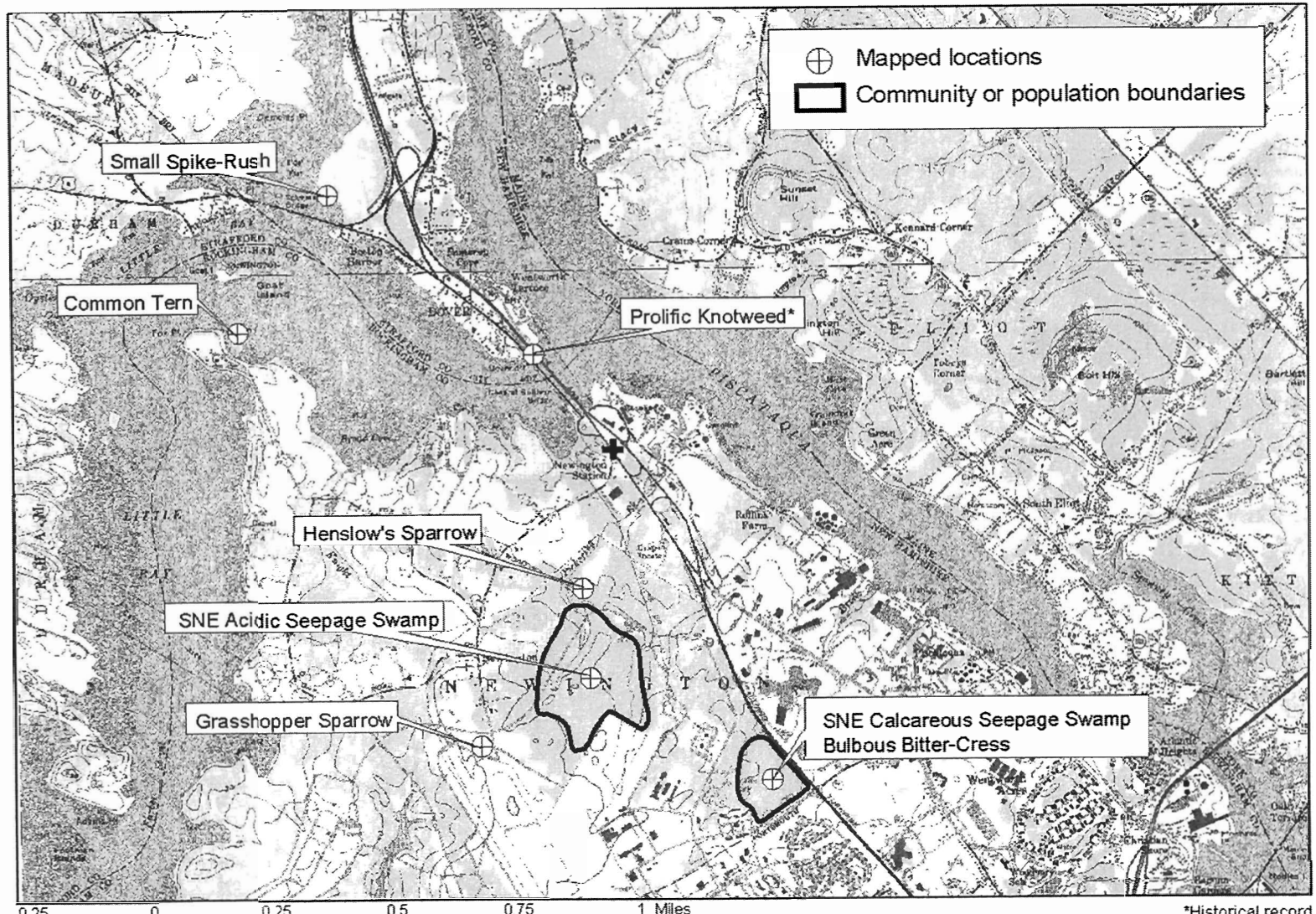
DRED/NHB
PO Box 1856
Concord NH 03302-1856

NH Natural Heritage Bureau

NHB: 2669

Known locations of rare species and exemplary natural communities

Note: Mapped locations are not always exact. Occurrences that are not in the vicinity of the project are not shown.



New Hampshire Natural Heritage Inventory - Community Record

SNE Acidic Seepage Swamp

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Rare or uncommon

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 1990: SOME CORDWOOD THINNING IN UPLAND PORTIONS OF TOWN FOREST.

General Area: HEADWATERS TO PICKERING BROOK. SEVERAL KNOLLS SUPPORT HEMLOCK, WHITE PINE, CHESTNUT.

Comments: ACCORDING TO C. STRAUS, PRESERVED AS TOWN FOREST SINCE 1710!

Location

Survey Site Name: NEWINGTON TOWN FOREST
Conservation Land:

County: Rockingham
Town(s): Newington
Size: 120 acres

USGS quad(s): Portsmouth (4307017)
Lat, Long: 430553N, 0704921W
Elevation: 80'

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: NEWINGTON. NEWINGTON TOWN FOREST. SOUTH OF MERRIMACK ROAD.

Dates documented

First observation: 1990
Last observation: 1990-05-22

New Hampshire Natural Heritage Inventory - Community Record

SNE Calcareous Seepage Swamp

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Excellent quality, condition and lanscape context ('A' on a scale of A-D).
Comments on Rank:

Detailed Description:

General Area: HEADWATERS OF PAUL BROOK. SHALLOW WATER UNDERLAIN BY RICH MUCK, ALTERNATING WITH ROCKY OR SANDY RIDGES WITH MATURE HARDWOOD AND HEMLOCK FOREST.

Location

Survey Site Name: PAUL BROOK SWAMP
Conservation Land:

County: Rockingham
Town(s): Newington
Size: 50 acres

USGS quad(s): Portsmouth (4307017)
Lat, Long: 430529N, 0704823W
Elevation: 60'

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: NEWINGTON. PAUL BROOK SWAMP. SOUTHWEST OF SPAULDING TURNPIKE, NORTHWEST OF PORTSMOUTH/NEWINGTON TOWN LINE.

Dates documented

First observation: 1990 Last observation: 1990-06-05

Straus, Clotilde. 1990. Field survey to Paul Brook Swamp on May 22, May 25, and June 6.

Mineral-enriched Swamps (including Seepage Swamps)

Mineral-enriched (minerotrophic) swamps are forested wetlands where minerals in the bedrock or soil have leached into the water and resulted in relatively high mineral levels. The most common source of mineral enrichment is groundwater seepage, but enrichment can also occur when near-surface groundwater flows through certain soils or bedrock types before entering the swamp. The plants that help identify these areas include some species that are indicative of seepage conditions, and some that are indicative of mineral-enriched, but not necessarily seepage, conditions (see below).

Red maple (*Acer rubrum*) is the predominant tree species in mineral-enriched swamps in central and southern New Hampshire. Northern white cedar (*Thuja occidentalis*), balsam fir (*Abies balsamea*), and red spruce (*Picea rubens*) are found further north. Other plants commonly found in mineral-enriched swamps include yellow birch (*Betula alleghaniensis*), highbush blueberry (*Vaccinium corymbosum*), and winterberry (*Ilex* spp.). Swamps with the greatest degree of mineral enrichment occur in calcium-rich areas and support additional rare species such as bulbous bitter-cress (*Cardamine bulbosa*), Loesel's twayblade (*Liparis loeselii*), and tufted loosestrife (*Lysimachia thyrsiflora*).

In some swamps, groundwater seepage emerges as pronounced springs actively welling up out of the ground and draining into brooks. In other swamps, seepage may only be present underground in the root zone. If the groundwater source is perennial, seasonal water level fluctuations tend to be reduced and conditions remain saturated all year long. The mineral-enriched swamps described here do not include those that occur next to rivers and streams and thus are strongly influenced by seasonal floods (e.g., floodplain forests and streamside swamps).

Mineral-enriched (minerotrophic) indicator species:
foamflower (*Tiarella cordifolia*)
jack in the pulpit (*Arisaema triphyllum*)
jewelweed (*Impatiens capensis*)
sensitive fern (*Onoclea sensibilis*)
skunk cabbage (*Symplocarpus foetidus*)
speckled alder (*Alnus incana var. americana*)
tussock sedge, non-tussock form of (*Carex stricta*)
violets (*Viola* spp.)
white turtlehead (*Chelone glabra*)

Seepage indicator species:
black ash (*Fraxinus nigra*)
common water pennywort (*Hydrocotyle americana*)
golden saxifrage (*Chrysosplenium americanum*)
lily-leaved twayblade (*Listera convallarioides*)*
marsh marigold (*Caltha palustris*)
northern spicebush (*Lindera benzoin*)
purple avens (*Geum rivale*)
swamp saxifrage (*Saxifraga pensylvanica*)
* rare species

Where Are They Found?

Mineral-enriched swamps are usually found in headwater portions of drainages and along the borders of larger swamp systems. They can be on sloping or level ground and occur where water below the surface is forced upward by an impervious bedrock or soil layer, such as hardpan or a layer of clay or silt.

Illustration by I.V. Seaboyer, c. 1997 DRED, SPNHF Adapted from Good Forestry in the Granite State

New Hampshire Natural Heritage Inventory - Plant Record

Bulbous Bitter-Cress

Cardamine bulbosa

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Listed Endangered	State:	Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Excellent quality, condition and lanscape context ('A' on a scale of A-D).
Comments on Rank: LARGEST PRISTINE POPULATION IN NEW HAMPSHIRE.

Detailed Description: 1990: 1001 TO 10,000 PLANTS, IN BUD AND FLOWER.

General Area: LARGE AREA OF PERMANENTLY WET, SEEPY OR SUMBERGED SOIL. WITH ONECLEA SENSIBILIS.

Location

Survey Site Name: PAUL BROOK SWAMP
Conservation Land:

County:	Rockingham	USGS quad(s):	Portsmouth (4307017)
Town(s):	Newington	Lat, Long:	430529N, 0704823W
Size:	2 acres	Elevation:	60'

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: NEWINGTON. PAUL BROOK SWAMP. VICINITY OF BASE ENTRANCE GATE A ALONG NEWINGTON ROAD (BASE) AND SPAULDING TURNPIKE.

Dates documented

First observation: 1990 Last observation: 1990-06-05

Straus, Clotilde. 1990. Field survey to Paul Brook Swamp on May 22, May 25, and June 6.

New Hampshire Natural Heritage Inventory - Plant Record

Small Spike-Rush

Eleocharis parvula

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Listed Threatened	State:	Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Fair quality, condition and/or lanscape context ('C' on a scale of A-D).
Comments on Rank:

Detailed Description: 1996: Northern (western river bank) site had between 51-100 marginally vigorous stems. Southern (eastern river bank) site had 101-1000 mature, fairly vigorous stems.

General Area: 1996: At northern site, associated species included Scirpus maritimus (saltmarsh bulrush) in low pannes, Spartina alterniflora (smooth cord-grass), and Juncus gerardii (salt marsh rush) (nearby). At southern site, associated species included S. alterniflora (smooth cord-grass), Scirpus robustus (stout bulrush), and Salicornia europaea (common glasswort). General area: vernal pools, fresh and brackish marsh, and high and low salt marsh communities nearby.

Comments: Minimal trail use.

Location

Survey Site Name: CLEMENTS POINT, BELLAMY RIVER WILDLIFE SANCTUARY
Conservation Land: Bellamy River Wildlife Sanctuary

County:	Strafford	USGS quad(s):	Dover East (4307027)
Town(s):	Dover	Lat, Long:	430749N, 0705044W
Size:		Elevation:	20'

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: From Rte. 4 in Dover, go 2.5 miles east of junction with Rte. 108. Turn onto Back River Road. After 0.8 miles, turn right onto Bay View Road. At end of road, just past mature pine stand, bear left onto gravel road and continue past field to parking area.

Dates documented

First observation: 1996-08-01 Last observation: 1996-08-06

Nichols, Bill. 1996. Field survey to Bellamy River WMA & Access, Dover on August 1.

Nichols, B. & D. Sperduto. 1997. Ecological Assessment of Selected Towns in the Great Bay Area. New Hampshire Natural Heritage Program, Concord NH. 141 pp.

New Hampshire Natural Heritage Inventory - Plant Record

Prolific Knotweed

Polygonum prolificum

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Apparently secure but with cause for concern
State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Historical records only - current condition unknown.
Comments on Rank:

Detailed Description: 1955.

General Area:

Location

Survey Site Name: HILTON STATE PARK
Conservation Land:

County: Strafford
Town(s): Dover
Size:

USGS quad(s): Portsmouth (4307017)
Lat, Long: 430710N, 0704938W
Elevation: 5'

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: DOVER.

Dates documented

First observation:

Last observation: 1955

New Hampshire Natural Heritage Inventory - Animal Record

Grasshopper Sparrow

Ammodramus savannarum

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2002: 2 adult males heard singing briefly in the evening and at least one bird also seen (Obs_id 250). 1995: One male seen and heard singing (Obs_id 256). 1990: Several birds heard near airfield; nesting not observed but "likely" according to Audubon Society of NH. 1986: One bird heard singing on far side of airfield.

General Area: 1995: Weedy grassland.

Location

Survey Site Name: PEASE INTERNATIONAL TRADEPORT
Conservation Land:

County: Rockingham
Town(s): Newington
Size:

USGS quad(s): Portsmouth (4307017)
Lat, Long: 430448N, 0704927W
Elevation: 60'

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Throughout mowed areas at Pease. At north end of Pease runway, off Short Road (Obs_id 250). At southernmost grassy island at Pease runway (Obs_id 256).

Dates documented

First observation: 1986
Last observation: 2002-06-09

Interactive Wildlife Web Page. 2002. Grasshopper Sparrow observed by Mark and Rebecca Suomala on 6/9/02 at Pease Air Force Base Site, as reported by Pamela Hunt (obs_id=250).

The U.S. Fish & Wildlife Service has jurisdiction over Federally listed species. Please contact them at 400 Ralph Pill Marketplace, 22 Bridge St., Concord NH 03301 or at (603) 225-1411.

New Hampshire Natural Heritage Inventory - Animal Record

Henslow's Sparrow

Ammodramus henslowii

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Apparently secure but with cause for concern
State:	W	State:	Not ranked (need more information)

Description at this Location

Conservation Rank: Extirpated - no longer present at this site.
Comments on Rank: Destroyed.

Detailed Description: 1983: Singing male observed on suitable habitat beginning in May by Tom Butler. Recorded and photographed (on 1 June 1983) by L. Master, Tom Butler, Connie Casas and others. BIRD PRESENT 5/24 TO 6/5.

General Area: 1983: Old field, wet along edges, with timothy, orchard grass, curly dock, asters, goldenrods, dandelions, cow vetch, common buttercup, yarrow, ragged-robin, bluegrass, Daucus.

Location

Survey Site Name: FOX POINT ROAD
Conservation Land:

County:	Rockingham	USGS quad(s):	Portsmouth (4307017)
Town(s):	Newington	Lat, Long:	430614N, 0704923W
Size:	4 acres	Elevation:	50'

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: From Rte. 4/16 at Newington Station, take Nimble Hill Road ca. 0.75 miles south to Fox Point Road. Field just east northeast of cul-de-sac at east end of Fox Point Road, 0.4 mile east of blinking light.

Dates documented

First observation: 1983 Last observation: 1983-06-01

Audubon Society of New Hampshire. 1986. Species report slips.

New Hampshire Natural Heritage Inventory - Animal Record

Common Tern

Sterna hirundo

Legal Status	Conservation Status
Federal: Not listed	Global: Demonstrably widespread, abundant, and secure
State: Listed Endangered	State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 1995: 9 nests; 20 adults observed. 1992: 6 nests; 9 fledglings. Highest number of adults observed was 10 on 6/25. 1991: 7+ nests; no fledglings. Nest failure presumed to be due to rat predation. 1990: 7 nests; 13 fledged chicks (1.9 fledglings / nest).

General Area: An island <0.8 ha. in area which supports small patches of sparse grasses, substantial shrub growth, and several small trees.

Comments: 1992: Town residents launch and moor private boats in the small cove east of Fox Point and south of Hen Island. The presence of terns is well-known by those who utilize this site, and they are careful not to land on or venture too close to the island during the breeding season. (Management comments): 1992: Contact with the town of Newington and the local residents is the most effective technique for eliminating human disturbance at this site. Traps were set for rats in the spring. 1991: All nests were lost to rats this season. Traps were set in the fall.

Location

Survey Site Name: HEN ISLAND
Conservation Land: Fox Point

County: Rockingham
Town(s): Newington
Size:

USGS quad(s): Portsmouth (4307017)
Lat, Long: 430716N, 0705114W
Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

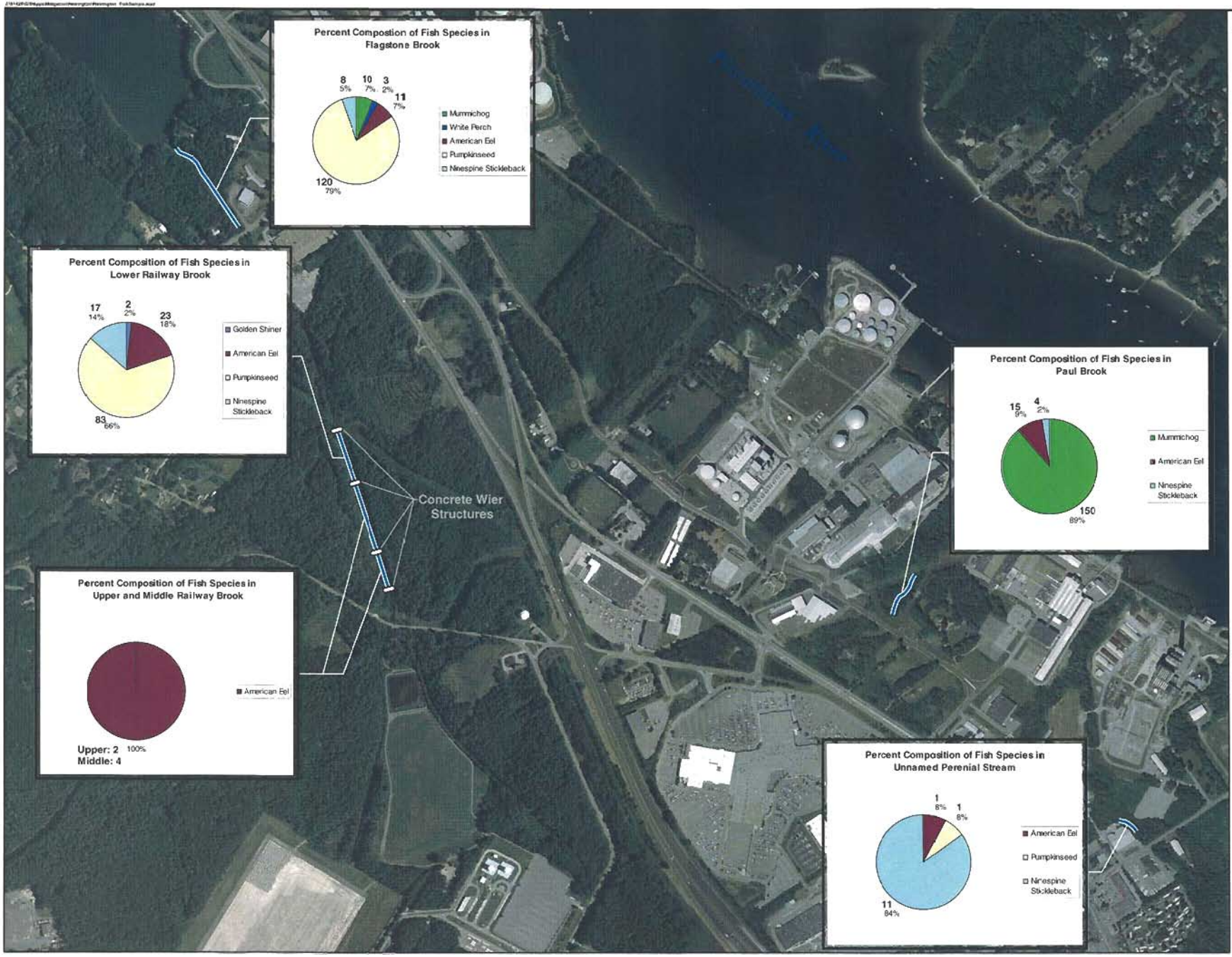
Directions: [Hen Island lies approximately 70 meters east of Fox Point on Little Bay in Newington.]

Dates documented

First observation: 1990 Last observation: 1995-06-28

U.S. Fish & Wildlife Service. 1995. 1995 New Hampshire Coastal Colonial Water Bird Inventory. Digital database printout.

Appendix F – Surface Water Biomonitoring Data



VHB

Vanasse Hangen Brustlin, Inc.

Transportation
Land Development
Environmental Services

Six Bedford Farms, Suite 607
Bedford, New Hampshire 03110
603-644-4888 • FAX 603-644-2385

LEGEND

Fish Sampling Stations

Reach Lengths (feet)

Railway Brook (Upper):	320
Railway Brook (Middle):	600
Railway Brook (Lower):	480
Flagstone Brook:	910
Paul Brook:	420
Unnamed Perenial Stream:	200

0 450 900 Feet

1 inch = 900 feet

Spaulding Turnpike Improvements
NHS-027-1(37), 11238
Newington to Dover, New Hampshire

Newington Fish Assessment

Notes:
Aerial photography is from NAIP 2003, distributed by NH GRANIT.
Fish composition data were collected by VHB, Inc. on October 4, 2005 using electro-fishing equipment.

Newington-Dover
Stream Assessment

Fish Population Inventory

Railway Bk.
Total Sample Reach: 1,330 ft.

Species	Common Name	Total
Notemigonus crysoleucas	Golden Shiner	2
Anguilla rostrata	American Eel	29
Lepomis gibbosus	Pumpkinseed	83
Pungitius pungitius	Ninespine Stickleback	17
		131

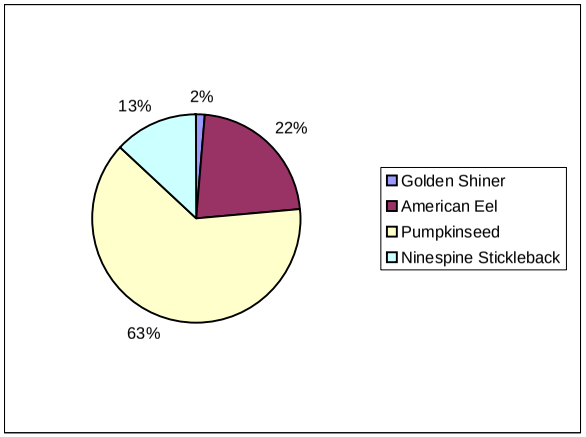


Figure 1. Percent composition of fish species in Railway Brook. The sampling technique was electro-fishing and covered an area between the furthest downstream and furthest upstream weir structures.

Flagstone Bk.
Total Sample Reach: 730 ft.

Species	Common Name	Total
Fundulus heteroclitus	Mummichog	10
Morone americana	White Perch	3
Anguilla rostrata	American Eel	11
Lepomis gibbosus	Pumpkinseed	120
Pungitius pungitius	Ninespine Stickleback	8
		152

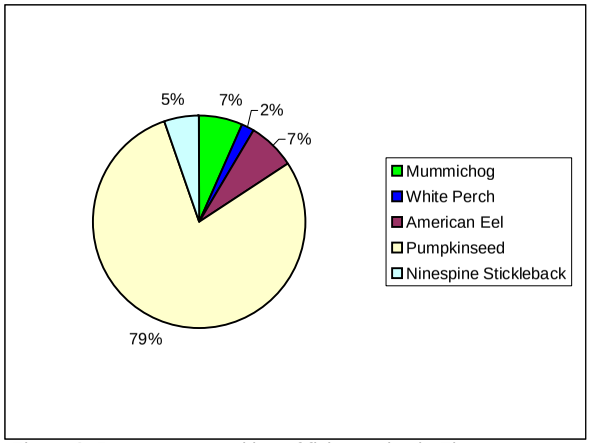


Figure 2. Percent composition of fish species in Flagstone Brook. The sampling technique was electro-fishing and covered an area moving upstream from the edge of tidal influence to the stream's origin at Nimble Hill Rd.

Newington-Dover
Stream Assessment

Fish Population Inventory

Paul Bk.
Total Sample Reach: 510 ft.

Species	Common Name	Total
Fundulus heteroclitus	Mummichog	150
Anguilla rostrata	American Eel	15
Pungitius pungitius	Ninespine Stickleback	4
		169

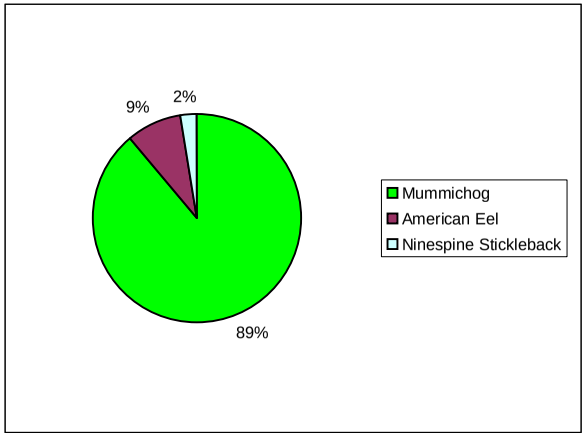


Figure 3. Percent composition of fish species in Paul Brook. The sampling technique was electro-fishing and covered an area from the road crossing of Shattuck Way downstream 510 ft.

Unnamed Perenial Str.
Total Sample Reach: 103 ft.

Species	Common Name	Total
Anguilla rostrata	American Eel	1
Lepomis gibbosus	Pumpkinseed	1
Pungitius pungitius	Ninespine Stickleback	11
		13

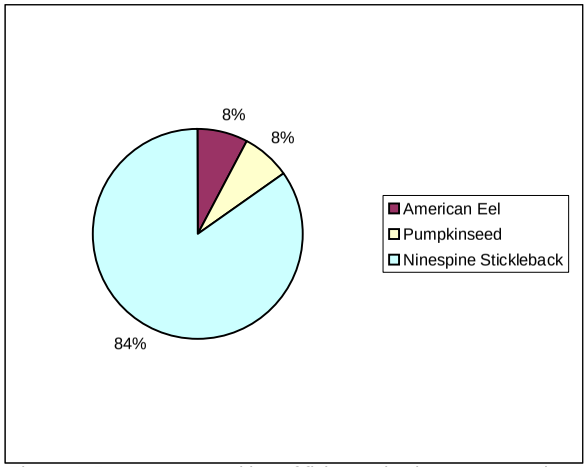


Figure 4. Percent composition of fish species in an unnamed tributary to the Piscataqua River. The sampling technique was electro-fishing and covered an area extending 103 ft. downstream of a point 150 ft. from the road crossing.

Newington-Dover
Stream Assessment

Macroinvertebrate Raw Data and Metric Calculations

Railway Brook

Order	Family	Tol. Val.	Number	Biotic Score = (Tol. Val.)*(Number)			
Coleoptera	Dytiscidae	8	1	8	0.009615385	-4.644390899	-0.044657605
Phylum: Mollusca	Class: Gastropoda	7	1	7	0.009615385	-4.644390899	-0.044657605
Himiptera	Notonectidae	8	1	8	0.009615385	-4.644390899	-0.044657605
Trichoptera	Polycentropodidae	6	2	12	0.019230769	-3.951243719	-0.075985456
Coleoptera	Haliplidae	8	1	8	0.009615385	-4.644390899	-0.044657605
Trichoptera	Limnephilidae	4	3	12	0.028846154	-3.54577861	-0.102282075
Coleoptera	Elmidae	4	1	4	0.009615385	-4.644390899	-0.044657605
Diptera	Chironomidae	6	13	78	0.125	-2.079441542	-0.259930193
Phylum: Annelida	Class: Oligochaeta	8	26	208	0.25	-1.386294361	-0.34657359
Ephemeroptera	Caenidae	7	3	21	0.028846154	-3.54577861	-0.102282075
Phylum: Mollusca	Class: Pelecypoda	8	4	32	0.038461538	-3.258096538	-0.125311405
Amphipoda	Gammaridae	6	37	222	0.355769231	-1.033472986	-0.367677889
Isopoda	Asellidae	8	2	16	0.019230769	-3.951243719	-0.075985456
Diptera	Tabanidae	6	1	6	0.009615385	-4.644390899	-0.044657605
Odonata	Petaluridae	6	1	6	0.009615385	-4.644390899	-0.044657605
Phylum: Annelida	Class: Hirundinea	7.5	7	52.5	0.067307692	-2.69848075	-0.181628512
			104	**Total Biotic Score: 700.5**			-1.950259886
				Final Biotic Score: 6.74		**Diversity Index:**	**1.95026**
				Water Quality Score: Poor			
				Total Family Richness: 16			
				EPT Richness: 3			
				% Contrib. of Dom. Fam: 35.6			

Newington-Dover
Stream Assessment

Macroinvertebrate Raw Data and Metric Calculations

Flagstone Brook

Order	Family	Tol. Val.	Number	Biotic Score = (Tol. Val.)*(Number)			
Coleoptera	Haliplidae	8	6	48	0.03	-3.506557897	-0.105196737
Phylum: Annelida	Class: Hirudinea	7.5	8	60	0.04	-3.218875825	-0.128755033
Isopoda	Asellidae	8	143	1144	0.715	-0.335472736	-0.239863006
Amphipoda	Gammaridae	6	8	48	0.04	-3.218875825	-0.128755033
Trichoptera	Philopotamidae	3	4	12	0.02	-3.912023005	-0.07824046
Coleoptera	Elmidae	4	17	68	0.085	-2.465104022	-0.209533842
Coleoptera	Psephenidae	4	4	16	0.02	-3.912023005	-0.07824046
Phylum: Mollusca	Class: Gastropoda	7	1	7	0.005	-5.298317367	-0.026491587
Trichoptera	Hydropsychidae	4	6	24	0.03	-3.506557897	-0.105196737
Diptera	Ceratopogonidae	6	1	6	0.005	-5.298317367	-0.026491587
Phylum: Mollusca	Class: Pelecypoda	8	2	16	0.01	-4.605170186	-0.046051702
			200	**Total Biotic Score: 1449**			-1.172816184
				Final Biotic Score: 7.25		**Diversity Index:**	**1.17282**
				Water Quality Score: Poor			
				Total Family Richness: 11			
				EPT Richness: 2			
				% Contrib. of Dom. Fam: 71.5			

Newington-Dover
Stream Assessment

Macroinvertebrate Raw Data and Metric Calculations

Unnamed Perennial Stream

Order	Family	Tol. Val.	Number	Biotic Score = (Tol. Val.)*(Number)			
Diptera	Tipulidae	5	1	5	0.012987013	-4.343805422	-0.056413057
Diptera	Ceratopogonidae	6	2	12	0.025974026	-3.650658241	-0.094822292
Phylum: Annelida	Class: Hirundinea	7.5	1	7.5	0.012987013	-4.343805422	-0.056413057
Coleoptera	Elmidae	4	1	4	0.012987013	-4.343805422	-0.056413057
Isopoda	Asellidae	8	4	32	0.051948052	-2.957511061	-0.153636938
Phylum: Annelida	Class: Oligochaeta	8	3	24	0.038961039	-3.245193133	-0.126436096
Coleoptera	Haliplidae	8	2	16	0.025974026	-3.650658241	-0.094822292
Diptera	Chironomidae	6	1	6	0.012987013	-4.343805422	-0.056413057
Phylum: Mollusca	Class: Gastropoda	7	62	434	0.805194805	-0.216671037	-0.174462393
			77	**Total Biotic Score: 540.5**			-0.869832241
				Final Biotic Score: 7.02		**Diversity Index:**	**0.86983**
				Water Quality Score: Poor			
				Total Family Richness: 9			
				EPT Richness: 0			
				% Contrib. of Dom. Fam: 80.5			

Newington-Dover
Stream Assessment

Macroinvertebrate Raw Data and Metric Calculations

Paul Brook

Order	Family	Tol. Val.	Number	Biotic Score = (Tol. Val.)*(Number)			
Coleoptera	Elmidae	4	211	844	0.496470588	-0.700231035	-0.347644114
Phylum: Annelida	Class: Hirudinea	7.5	7	52.5	0.016470588	-4.10617902	-0.067631184
Coleoptera	Hydraenidae	8	1	8	0.002352941	-6.052089169	-0.01424021
Diptera	Tipulidae	5	3	15	0.007058824	-4.95347688	-0.034965719
Odonata	Aeshnidae	3	1	3	0.002352941	-6.052089169	-0.01424021
Isopoda	Asellidae	8	172	1376	0.404705882	-0.904594692	-0.366094793
Trichoptera	Hydropsychidae	4	11	44	0.025882353	-3.654193896	-0.094579136
Cleoptera	Psephenidae	4	3	12	0.007058824	-4.95347688	-0.034965719
Trichoptera	Philopotamidae	3	4	12	0.009411765	-4.665794808	-0.043913363
Phylum: Mollusca	Class: Gastropoda	7	2	14	0.004705882	-5.358941988	-0.025218551
Diptera	Chironomidae	6	4	24	0.009411765	-4.665794808	-0.043913363
Phylum: Nematomorpha		8.5	3	25.5	0.007058824	-4.95347688	-0.034965719
Lepidoptera	Pyralidae	5	3	15	0.007058824	-4.95347688	-0.034965719
			425	**Total Biotic Score: 2445**			-1.1573378
				Final Biotic Score: 5.75		**Diversity Index:**	**1.15734**
				Water Quality Score: Fair			
				Total Family Richness: 13			
				EPT Richness: 2			
				% Contrib. of Dom. Fam: 49.6			

Water Quality Score Ranges
0-3.75 = Excellent
3.76-4.25 = Very Good
4.26-5.00 = Good
5.01-5.75 = Fair
5.76-6.50 = Fairly Poor
6.51-7.25 = Poor
>7.26 = Very Poor

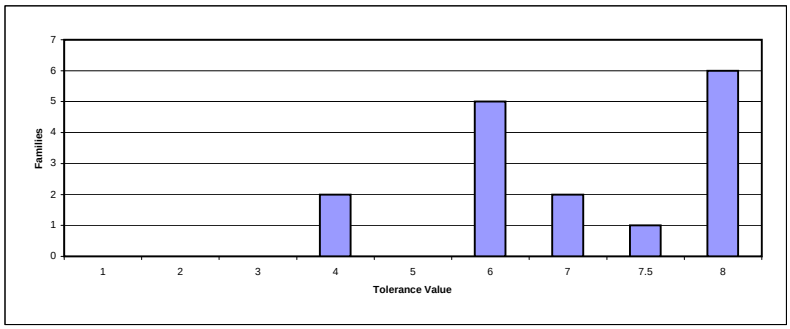


Figure 1. Invertebrate tolerance distribution at Railway Brook.

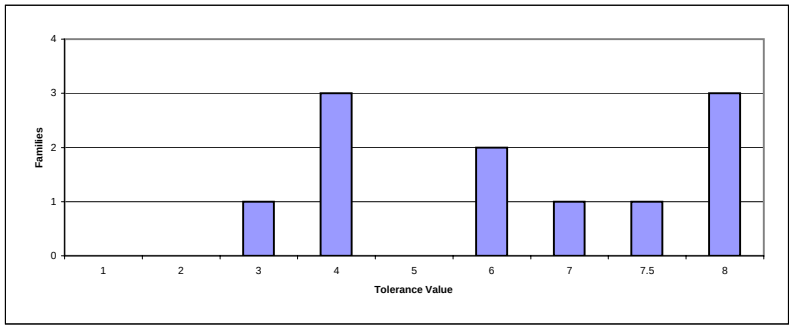


Figure 2. Invertebrate tolerance distribution at Flagstone Brook.

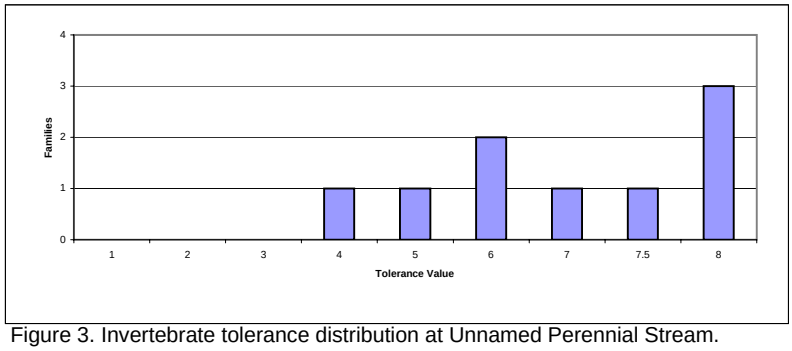


Figure 3. Invertebrate tolerance distribution at Unnamed Perennial Stream.

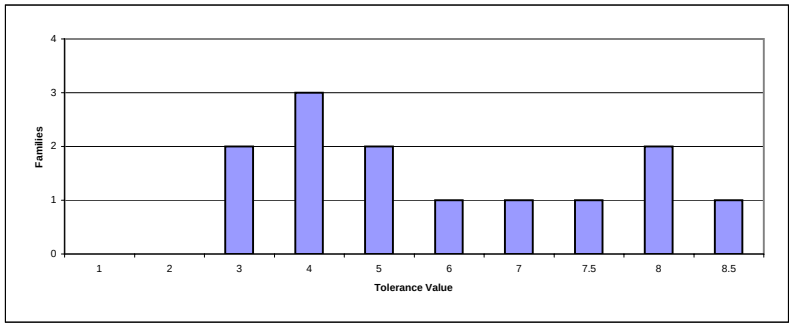


Figure 4. Invertebrate tolerance distribution at Paul Brook.

Newington-Dover
Stream Assessment

Water Chemistry Raw Data

Railway Brook	Sample 1	Sample 2	Sample 1	Sample 2	Sample 1	Sample 2
Date:	9/16/2005	9/16/2005	9/27/2005	9/27/2005	10/4/2005	10/4/2005
Turbidity (NTU)	12.5	4.82	14.4	6.03	3.59	4.73
pH	6.75	7.36	7.08	7.64	7.34	7.99
Conductivity (µS)	206.1	104.7	186.9	81.9	151.2	201.3
Sp. Cond. (µS)	221.3	113.4	221.1	91.5	188.2	237.6
Salinity (ppt)	0.1	0.1	0.1	0	0.1	0.1
Temperature (C)	21.4	21	16.9	19.5	14.7	17

Upper Pickering Bk.	
Date:	9/16/2005
Turbidity (NTU)	5.92
pH	6.93
Conductivity (µS)	193.3
Sp. Cond. (µS)	211.6
Salinity (ppt)	0.1
Temperature (C)	20.4

Flagstone Brook			
Date:	9/16/2005	9/27/2005	10/4/2005
Turbidity (NTU)	9.73	7.64	14.8
pH	7.11	7.4	7.07
Conductivity (µS)	159.9	157.2	196.5
Sp. Cond. (µS)	174.6	184.2	243.1
Salinity (ppt)	0.1	0.1	0.1
Temperature (C)	20.6	17.3	14.9

Paul Brook			
Date:	9/16/2005	9/27/2005	10/4/2005
Turbidity (NTU)	0.83	4.92	1.7
pH	6.9	7.17	7.15
Conductivity (µS)	780	836	1497
Sp. Cond. (µS)	854	957	1758
Salinity (ppt)	0.4	0.5	0.9
Temperature (C)	20.5	18.4	17.3

Unnamed Perennial Stream			
Date:	9/16/2005	9/27/2005	10/4/2005
Turbidity (NTU)	4.66	4.06	
pH	6.54	6.78	6.5
Conductivity (µS)	572	750	946
Sp. Cond. (µS)	638	863	1166
Salinity (ppt)	0.3	0.4	0.6
Temperature (C)	19.6	18.2	15.2

Appendix G – Historic Resource Documentation

NEW HAMPSHIRE DIVISION OF HISTORICAL RESOURCES

State of New Hampshire, Department of Cultural Resources
19 Pillsbury Street, Concord, NH 03301-3570
TDD Access: Relay NH 1-800-735-2964
www.nh.gov/nhdhr

603-271-3483
603-271-3558
FAX 603-271-3433
preservation@nhdhr.state.nh.us

3 February 2006

Mr. Harry S. Kinter
Federal Highway Administration
19 Chenell Drive, Suite One
Concord, New Hampshire, 03301

Re: Newington-Dover NHS-02719(037), 11238

Dear Mr. Kinter:

Based on a review pursuant to 36 CFR 800.4, it has been agreed that the General Sullivan Bridge (DOV0158), spanning Little Bay, is eligible for the National Register of Historic Places. The above-cited project will entail the removal of the roadway and north embankment approach to the Sullivan Bridge and the limited reconfiguration of the north abutment and wing wall to accommodate the widening of the connector road under Little Bay Bridges. Applying the criteria of effect at 36 CFR 800.5, we have determined that these undertakings will have an adverse effect on the General Sullivan Bridge.

Mitigation for this adverse effect will include rehabilitation of the General Sullivan Bridge for use by pedestrians and bicycles and its continued use for fishing.

The New Hampshire Division of Historical Resources affirms that rehabilitation of the General Sullivan Bridge greatly outweighs the technical finding of "adverse effect," and renders the adverse effect insignificant in comparison to the public benefit that will result from rehabilitation of the bridge. The Division strongly supports the proposed treatment of the General Sullivan Bridge, one of New Hampshire's most significant and historic engineering and transportation resources. We are grateful for the detailed and prudent planning and analysis that culminated in a determination to preserve the structure.

Sincerely,

James McConaha
Director and State Historic
Preservation Officer

Cc: Commissioner Carol A. Murray, P.E.
Assistant Commissioner Jeff Brillhart, P.E.

New Hampshire DOT
Department of Transportation

CAROL A. MURRAY, P.E.
Commissioner

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

JEFF BRILLHART, P.E.
Assistant Commissioner

Newington-Dover
NHS-02719(037)
11238
Page 1

Adverse Effect Memo

Pursuant to meetings and discussions on June 1, August 3, and September 7, 2000; February 10 and August 2, 2001; November 14, 2002; September 11, 2003; April 1, June 10, July 16, and August 5, 2004; January 6, February 22, April 7, August 7, and December 8, 2005; and January 5, 2006 and for the purpose of compliance with regulations of the National Historic Preservation Act, as amended, and the Advisory Council on Historic Preservation's *Procedures for the Protection of Historic Properties* (36 CFR 800), the NH Division of Historical Resources (NHDHR) and the NH Division of the Federal Highway Administration (FHWA) have coordinated the identification and evaluation of historic and archaeological properties with plans to reconstruct and widen turnpike locations including the Little Bay Bridges between Gosling Road in Newington and the Dover Tolls in the towns of Dover and Newington, New Hampshire.

Based on a review pursuant to 36 CFR 800.4 of the historical and architectural significance of identified resources and the potential significance for archaeological remains in the project area, we agree that the following individual properties are eligible for listing in the National Register of Historic Places:

Individually Eligible Properties and Districts:

Benjamin Hoyt House, 97-105 Nimble Hill Road (NWN0148)
Newington Depot, End of Bloody Point Road (NWN0168)
John Downing Farm, 48 Patterson Lane (NWN0201)
Beane Farm, 2299 Woodbury Ave. (NWN0204)
Isaac Dow House, Woodbury Ave. (NWN0205)
Portsmouth Water Booster Station, Arboretum Dr. (NWN0228)

Ira F. Pinkham House, 430 Dover Point Rd. (DOV0093)
Charles Morang House, 419 Dover Point Rd. (DOV0098)
Card-Coleman-Cousens House, 416 Dover Point Rd. (DOV0099)
Crocker-Fleming House, 405 Dover Point Rd. (DOV0104)
Wiggins-Miksenas House, 7 Boston Harbor Rd. (DOV0125)
Henderson House, 284 Dover Point Rd. (DOV0134)
Lower Neck School, 294 Dover Point Rd. (DOV0136)
Dover Point Chemical Co. #1, 292 Dover Point Rd. (DOV0151)
General Sullivan Bridge, spanning Little Bay (DOV0158)
Chapman Cabins Historic District, NW end of Boston Harbor Rd. (DOV-CH)
Cullen-Bruyere Camps, 39 Boston Harbor Rd. (DOV-CB)

NHDHR requested more information for the following properties that were examined for the project: Varney Cabin Complex (DOV0113), Sprague District Area (NWN-SP), Patterson Point District Area (NWN-CPL), and the Hilton Park Picnic Shelter in the Hilton Park Safety Rest Area (part of DOV0150). The park as a whole (DOV0150) was not found to be eligible for the National Register. These properties are currently not affected by the project. If the project design should change, then the more information request will be completed. Areas of archaeological sensitivity have been identified for the project corridor.

Applying the criteria of effect at 800.5, we have determined that the project will have an adverse effect on the following properties: General Sullivan Bridge (DOV0158), Ira Pinkham House (DOV0093), Beane Farm (NWN0204), Isaac Dow House (NWN0205), and the Portsmouth Water Booster Station (NWN0208).

Adverse effects to the Beane Farm (NWN0204) include minor filling on the property, loss of mature trees, loss of view of existing hillcrest, and loss of hilltop setting caused by the elimination of the crest resulting from the extension of Woodbury Avenue over the Spaulding Turnpike. Mitigation will include planting of new silver maples and lilacs on the property in consultation with the owner and their placement in relation to the power lines that avoids the need for trimming. Adverse effects to the Dow House (NWN0205) include removal of the stone retaining wall, minor slope impacts, and loss of shrubs. Mitigation for this loss will include replacement of the granite slab wall in-kind and appropriate landscaping with shrubs in consultation with the owner. Note that the NHDOT also minimized right-of-way takes to reduce its impacts.

Adverse effects to the Portsmouth Water Booster Station (NWN0228) occur through acquisition of a portion of the property. Mitigation is accomplished though leaving a tree buffer between the Turnpike and the historic building and its documentation by completion of a Determination of Eligibility.

Adverse effects to the Ira Pinkham House (DOV0093) include strip acquisition and the need to take the whole property including the house and barn. Mitigation will involve producing a state-level Historic American Building Survey for the dwelling, documentation of the barn's structure in the same document, preparation of preservation covenants for the house and barn, marketing the barn for relocation if structurally feasible, and marketing the dwelling.

Adverse effects to the General Sullivan Bridge (DOV0158) include the removal of the roadway and north embankment approach to the bridge and limited reconfiguration of the north abutment and wing wall to accommodate the widening of the connector road under the Little Bay Bridges. Mitigation for these impacts will include rehabilitation of the bridge for use by pedestrians and bicycles and its continued use for fishing. Work on the bridges will not impact the adjacent Hilton Park Picnic Shelter. Overall, the impact of the project on the General Sullivan Bridge will be beneficial.

The NHDOT will complete all phased archaeological investigations prior to construction.

In accordance with the Advisory Council's regulations, consultation will continue, as appropriate, as this project proceeds.

Linda Wilson, Deputy
State Historic Preservation Officer

for Kathleen O. Laffey, Administrator
Federal Highway Administration

Concurred with by the New Hampshire Department of Transportation:

Date: 2/9/06 By:

Joyce McKay, Cultural Resources Manager

c.c. Harry Kinter Chris Waszczuk
Linda Wilson Marc Laurin

S:\PROJECTS\DESIGN\11238\Cultural\memo.doc

(June 2006)

NHDHR Determination of Eligibility / Effect (36 CFR Part 800)

Project:	Newington-Dover, NHS-027-1(37), 11238	**Inventory #:**	DOV0093
Date of group review:	December 8, 2005	**Area:**	Newington-Dover Project Area (ND)
Participants:	FHWA, NHDOT, NHDHR	**Town / City:**	Dover
Property name:	Ira F. Pinkham House	**County:**	Strafford
Address:	430 Dover Point Road		
Agency:	NH DOT	**Reviewed for:**	R&C

Individual Properties

NR SR
[x] [x] Eligible (district N/A)
[ ] [ ] Eligible, also in district
[ ] [ ] Eligible, only in district
[ ] [ ] Not evaluated for individual eligibility
[ ] [ ] Listed in the National or NH Registers of Historic Places

Districts

NR SR
[ ] [ ] Eligible
[ ] [ ] Not eligible

[x] [x] Not evaluated as a district
[ ] [ ] Listed in the National Register of Historic Places

Integrity: [x] Location [x] Design [x] Setting [x] Materials [x] Workmanship [x] Feeling [x] Association

Criteria: [x] A (Event) [ ] B (Person) [x] C (Architecture/Engineering) [ ] D (Archaeology) [ ] E (Exception)

Level: [x] Local [ ] State [ ] National

Significance: The Ira F. Pinkham House is significant for its historical associations with several important historical contexts on Dover Point -- brickmaking, agriculture and summer home tourism -- as well as its architectural significance as a nid-19th century farm complex, altered to serve the needs of early 20th century summer residents.

Eligible Acreage: 00.80acres

36 CFR 800.5 Criteria of Effect & Adverse Effect

☒ **36 CFR 800.5(a): Apply criteria of adverse effect**. In consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified historic properties, the agency official shall apply the criteria of adverse effect to historic properties within the area of potential effects. The agency official shall consider any views concerning such effects which have been provided by consulting parties and the public.

☒ **Effect:** The undertaking may alter National Register-qualifying characteristics and features of
Section 106: [x] location [x] design [x] setting [x] materials [x] workmanship [x] feeling [x] association
Section 4(f): [x] use

☒ **36 CFR 800.5(a)(1): Criteria of adverse effect:** an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling and association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative. Adverse effects on historic properties include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;
(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
(iii) Removal of the property from its historic location;
(iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;
(vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
(vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

☐ **36 CFR 800.5(b): Finding of no adverse effect:** [*Otherwise adverse effects may be considered not adverse when*] the agency official, in consultation with the SHPO/THPO, may propose a finding of no adverse effect when the undertaking's effects do not meet the criteria of paragraph (a)(1) of this section or the undertaking is modified or conditions are imposed, such as the subsequent review of plans for rehabilitation by the SHPO/THPO to ensure consistency with the *Secretary's Standards for the Treatment of Historic Propertie*s (36 CFR Part 68) and applicable guidelines, to avoid adverse effects.

☐ **No historic properties affected:** there are no historic properties present ***OR*** historic properties are present, but the undertaking will not alter any characteristics that would qualify the property for the National Register.

36 CFR 800.5(c): Consulting party review. If the agency official proposes a finding of no adverse effect, the agency official shall notify all consulting parties of the finding and provide them with the documentation specified in § 800.11(e). The SHPO/THPO shall have 30 days from receipt to review the finding.

(June 2006)

NHDHR Determination of Eligibility / Effect (36 CFR Part 800)

Project:	Newington-Dover, NHS-027-1(37), 11238	**Inventory #:**	DOV0093
Date of group review:	December 8, 2005	**Area:**	Newington-Dover Project Area (ND)
Participants:	FHWA, NHDOT, NHDHR	**Town / City:**	Dover
Property name:	Ira F. Pinkham House	**County:**	Strafford
Address:	430 Dover Point Road		
Agency:	NH DOT	**Reviewed for:**	R&C

Comments: (All Dover alternatives) Section 106 and 4(f) adverse effects. As proposed, the barn will be impacted by slope work, and strip acquisition will be required.

Mitigation: Documentation of the barn through a state-level Historic American Building Survey; and investigation of the barn to determine its suitability for relocation. If suitable, NHDOT will market the barn for relocation. If the NHDOT purchases the associated dwelling, then it will be documented through a state-level Historic American Building Survey and marketed at its current site.

(June 2006)

NHDHR Determination of Eligibility / Effect (36 CFR Part 800)

Project:	Newington-Dover, NHS-027-1(37), 11238	**Inventory #:**	DOV0158
Date of group review:	December 8, 2005	**Area:**	Newington-Dover Project Area
Participants:	FHWA, NHDOT, NHDHR	**Town / City:**	Dover
Property name:	General John Sullivan Bridge	**County:**	Strafford
Address:	Over Little Bay, parallel to the Spaulding Turnpike		
Agency:	NH DOT	**Reviewed for:**	R&C

Individual Properties

NR SR
[x] [x] Eligible (district N/A)
[ ] [ ] Eligible, also in district
[ ] [ ] Eligible, only in district
[ ] [ ] Not evaluated for individual eligibility
[ ] [ ] Listed in the National or NH Registers of Historic Places

Districts

NR SR
[ ] [ ] Eligible
[ ] [ ] Not eligible
[x] [x] Not evaluated as a district
[ ] [ ] Listed in the National Register of Historic Places

Integrity: [x] Location [x] Design [x] Setting [x] Materials [x] Workmanship [x] Feeling [x] Association

Criteria: [x] A (Event) [ ] B (Person) [x] C (Architecture/Engineering) [ ] D (Archaeology) [ ] E (Exception)

Level: [ ] Local [x] State [ ] National

Significance: Built in 1934 under difficult weather and tidal conditions, the General Sullivan Bridge was the keystone of a project that was then regarded as "the most unique and outstanding along the line of bridge and highway construction that has ever been proposed in the history of the State." Design and construction of the bridge were noteworthy achievements, described in articles in engineering journals of the time.

The General Sullivan Bridge was the first span in New Hampshire to be designed as a continuous arched truss, without structural breaks at its supporting piers. This design employed newly developed sophistication in analyzing stresses in continuous structures. The General Sullivan Bridge was designed by Fay, Spofford and Thorndike, bridge design specialists from Boston. Founded in 1914, this partnership was one of the most prolific American bridge engineering firms of the 1920s and 1930s. Charles M. Spofford was an authority in structural analysis who had authored a textbook, *The Theory of Structures* (1911, 1915, 1928*),* which outlined some of the methods of analysis for statically indeterminate structures that were employed in the design of the bridge, specifically the 'Method of Least Work." In 1929, Fay, Spofford and Thorndike had designed a direct prototype for the Sullivan Bridge--the Lake Champlain Bridge, between Chimney Point in Addison, Vermont, and Fort Frederick at Crown Point, New York.

The Sullivan Bridge restored a long-disused travel route in southern New Hampshire. Until the bridge opened, all traffic from Portsmouth to Concord traveled first to Dover, then proceeded west through Barrington on Route 9 to join the New Hampshire Turnpike Road (Route 4) in Northwood. The Sullivan Bridge and a companion structure, the Scammell Bridge, provided a new connection with the eastern end of the old turnpike at Cedar Point in Durham. Conducting traffic along the old route through Durham, Lee, and Nottingham, the bridge thus restored usefulness to the full length of the turnpike, and re-established an important transportation network. When New Hampshire's bridges were evaluated for historical and engineering significance in 1982, the General Sullivan Bridge attained a numerical score of 28 points, one of the highest rankings achieved by any New Hampshire bridge.

Eligible Acreage: Approximately 2.5 acres, which includes the bridge itself, its abutments and approach roads.

36 CFR 800.5 Criteria of Effect & Adverse Effect

☒ **36 CFR 800.5(a): Apply criteria of adverse effect**. In consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified historic properties, the agency official shall apply the criteria of adverse effect to historic properties within the area of potential effects. The agency official shall consider any views concerning such effects which have been provided by consulting parties and the public.

☒ **Effect:** The undertaking may alter National Register-qualifying characteristics and features of
Section 106: [ ] location [x] design [x] setting [ ] materials [ ] workmanship [ ] feeling [x] association
Section 4(f): [x] use

☒ **36 CFR 800.5(a)(1): Criteria of adverse effect:** an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling and association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative. Adverse effects on historic properties include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;
(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
(iii) Removal of the property from its historic location;
(iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;

(June 2006)

NHDHR Determination of Eligibility / Effect (36 CFR Part 800)

Project:	Newington-Dover, NHS-027-1(37), 11238	**Inventory #:**	DOV0158
Date of group review:	December 8, 2005	**Area:**	Newington-Dover Project Area
Participants:	FHWA, NHDOT, NHDHR	**Town / City:**	Dover
Property name:	General John Sullivan Bridge	**County:**	Strafford
Address:	Over Little Bay, parallel to the Spaulding Turnpike		
Agency:	NH DOT	**Reviewed for:**	R&C

36 CFR 800.5(a)(1): Criteria of adverse effect, continued:

(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;
(vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
(vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

☐ **36 CFR 800.5(b): Finding of no adverse effect:** [*Otherwise adverse effects may be considered not adverse when*] the agency official, in consultation with the SHPO/THPO, may propose a finding of no adverse effect when the undertaking's effects do not meet the criteria of paragraph (a)(1) of this section or the undertaking is modified or conditions are imposed, such as the subsequent review of plans for rehabilitation by the SHPO/THPO to ensure consistency with the *Secretary's Standards for the Treatment of Historic Properties* (36 CFR Part 68) and applicable guidelines, to avoid adverse effects.

☐ **No historic properties affected:** there are no historic properties present ***OR*** historic properties are present, but the undertaking will not alter any characteristics that would qualify the property for the National Register.

36 CFR 800.5(c): Consulting party review. If the agency official proposes a finding of no adverse effect, the agency official shall notify all consulting parties of the finding and provide them with the documentation specified in § 800.11(e). The SHPO/THPO shall have 30 days from receipt to review the finding.

Comments: (All alternatives) The General Sullivan Bridge will be preserved for public use (see Mitigation section, below). Most of the construction work will be within the NH DOT right-of-way. Because Hilton Park has been determined not to be eligible for the National Register, construction easements and staging within the west side of the park will not constitute adverse effects.

Mitigation: Any adverse effects resulting from reconfiguration of the abutment and wingwall to accommodate the widening of the connector road under the Little Bay Bridges, and removal of the roadway and the approach embankment on the Dover side, will be greatly ameliorated by the rehabilitation of the General Sullivan Bridge for public recreational use, pedestrians, and bicyclists, resulting in an overall beneficial effect.

(June 2006)

NHDHR Determination of Eligibility / Effect (36 CFR Part 800)

Project:	Newington-Dover, NHS-027-1(37), 11238	**Inventory #:**	NWN0204
Date of group review:	December 8, 2005	**Area:**	Newington-Dover Project Area (ND)
Participants:	FHWA, NHDOT, NHDHR	**Town / City:**	Newington
Property name:	Beane Farm	**County:**	Rockingham
Address:	2299 Woodbury Avenue		
Agency:	NH DOT	**Reviewed for:**	R&C

Individual Properties

NR	SR	
[x]	[x]	Eligible (district N/A)
[ ]	[ ]	Eligible, also in district
[ ]	[ ]	Eligible, only in district
[ ]	[ ]	Not evaluated for individual eligibility
[ ]	[ ]	Listed in the National or NH Registers of Historic Places

Districts

NR	SR	
[ ]	[ ]	Eligible
[ ]	[ ]	Not eligible
[x]	[x]	Not evaluated as a district
[ ]	[ ]	Listed in the National Register of Historic Places

Integrity: [x] Location [x] Design [x] Setting [x] Materials [x] Workmanship [x] Feeling [x] Association

Criteria: [ ] A (Event) [ ] B (Person) [x] C (Architecture/Engineering) [ ] D (Archaeology) [ ] E (Exception)

Level: [x] Local [ ] State [ ] National

Significance: The Beane Farm is architecturally significant as a connected farm complex constructed in response to expanding dairy farming in Newington. Additionally, the Beane Farm, with the Dow House (#NWN0204) across the street, "form a strong visual anchor at the top of Beane's Hill, conveying the last remnant of the area's nineteenth and early twentieth century associations."

Eligible Acreage: 4.0+/- acres, approximately half of map/parcel 19/9 (8.22 acres)

36 CFR 800.5 Criteria of Effect & Adverse Effect

☒ **36 CFR 800.5(a): Apply criteria of adverse effect**. In consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified historic properties, the agency official shall apply the criteria of adverse effect to historic properties within the area of potential effects. The agency official shall consider any views concerning such effects which have been provided by consulting parties and the public.

☒ **Effect:** The undertaking may alter National Register-qualifying characteristics and features of
Section 106: [ ] location [ ] design [x] setting [ ] materials [ ] workmanship [x] feeling [x] association
Section 4(f): [x] use

☒ **36 CFR 800.5(a)(1): Criteria of adverse effect:** an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling and association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative. Adverse effects on historic properties include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;
(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
(iii) Removal of the property from its historic location;
(iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;
(vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
(vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

☐ **36 CFR 800.5(b): Finding of no adverse effect:** [*Otherwise adverse effects may be considered not adverse when*] the agency official, in consultation with the SHPO/THPO, may propose a finding of no adverse effect when the undertaking's effects do not meet the criteria of paragraph (a)(1) of this section or the undertaking is modified or conditions are imposed, such as the subsequent review of plans for rehabilitation by the SHPO/THPO to ensure consistency with the *Secretary's Standards for the Treatment of Historic Propertie*s (36 CFR Part 68) and applicable guidelines, to avoid adverse effects.

☐ **No historic properties affected:** there are no historic properties present ***OR*** historic properties are present, but the undertaking will not alter any characteristics that would qualify the property for the National Register.

36 CFR 800.5(c): Consulting party review. If the agency official proposes a finding of no adverse effect, the agency official shall notify all consulting parties of the finding and provide them with the documentation specified in § 800.11(e). The SHPO/THPO shall have 30 days from receipt to review the finding.

(June 2006)

NHDHR Determination of Eligibility / Effect (36 CFR Part 800)

Project:	Newington-Dover, NHS-027-1(37), 11238	**Inventory #:**	NWN0204
Date of group review:	December 8, 2005	**Area:**	Newington-Dover Project Area (ND)
Participants:	FHWA, NHDOT, NHDHR	**Town / City:**	Newington
Property name:	Beane Farm	**County:**	Rockingham
Address:	2299 Woodbury Avenue		
Agency:	NH DOT	**Reviewed for:**	R&C

Comments: (All Newington alternatives) Section 106 and 4(f) adverse effects. Impacts will include minor fill on the property, loss of view of the existing crest of the hill and loss of hilltop setting, due to extending Woodbury Avenue over the Turnpike, and loss of mature trees. It is agreed that the boundary of the National Register-eligible property within the 8.22 acre parcel extends northerly from the edge of the parking lot and follows along the property lines, and consists of approximately 4.0 acres, as indicated on page B-1 of the inventory form..

Mitigation: In consultation with the property owner, mitigation will include planting replacement silver maples (large-caliper) and lilacs on the property, far enough away from the power lines to avoid future tree-trimming by the power company as the trees mature. Plant replacement lilacs and "door trees" flanking the entrance.

(June 2006)

NHDHR Determination of Eligibility / Effect (36 CFR Part 800)

Project:	Newington-Dover, NHS-027-1(37), 11238	**Inventory #:**	NWN0205
Date of group review:	December 8, 2005	**Area:**	Newington-Dover Project Area (ND)
Participants:	FHWA, NHDOT, NHDHR	**Town / City:**	Newington
Property name:	Isaac Dow House	**County:**	Rockingham
Address:	Woodbury Avenue		
Agency:	NH DOT	**Reviewed for:**	R&C

Individual Properties

NR SR
[x] [x] Eligible (district N/A)
[ ] [ ] Eligible, also in district
[ ] [ ] Eligible, only in district
[ ] [ ] Not evaluated for individual eligibility
[ ] [ ] Listed in the National or NH Registers of Historic Places

Districts

NR SR
[ ] [ ] Eligible
[ ] [ ] Not eligible
[x] [x] Not evaluated as a district
[ ] [ ] Listed in the National Register of Historic Places

Integrity: [x] Location [x] Design [x] Setting [x] Materials [x] Workmanship [x] Feeling [x] Association

Criteria: [ ] A (Event) [ ] B (Person) [x] C (Architecture/Engineering) [ ] D (Archaeology) [ ] E (Exception)

Level: [x] Local [ ] State [ ] National

Significance: The Isaac Dow House is architecturally significant as an example of the Federal style and form, updated in the later 19th century as tastes and technologies changed. Together, the Dow House and the Beane Farm (#NWN0204)across the road "form a strong visual anchor at the top of Beane's Hill, conveying the last remnant of the area's 19th and early 20th century associations."

Eligible Acreage: 0.285 acres, a portion of map/parcel 19/01A

36 CFR 800.5 Criteria of Effect & Adverse Effect

☒ **36 CFR 800.5(a): Apply criteria of adverse effect**. In consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified historic properties, the agency official shall apply the criteria of adverse effect to historic properties within the area of potential effects. The agency official shall consider any views concerning such effects which have been provided by consulting parties and the public.

☒ **Effect:** The undertaking may alter National Register-qualifying characteristics and features of
Section 106: [ ] location [ ] design [x] setting [ ] materials [ ] workmanship [x] feeling [x] association
Section 4(f): [x] use

☒ **36 CFR 800.5(a)(1): Criteria of adverse effect:** an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling and association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative. Adverse effects on historic properties include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;
(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
(iii) Removal of the property from its historic location;
(iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;
(vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
(vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

☐ **36 CFR 800.5(b): Finding of no adverse effect:** [*Otherwise adverse effects may be considered not adverse when*] the agency official, in consultation with the SHPO/THPO, may propose a finding of no adverse effect when the undertaking's effects do not meet the criteria of paragraph (a)(1) of this section or the undertaking is modified or conditions are imposed, such as the subsequent review of plans for rehabilitation by the SHPO/THPO to ensure consistency with the *Secretary's Standards for the Treatment of Historic Propertie*s (36 CFR Part 68) and applicable guidelines, to avoid adverse effects.

☐ **No historic properties affected:** there are no historic properties present ***OR*** historic properties are present, but the undertaking will not alter any characteristics that would qualify the property for the National Register.

36 CFR 800.5(c): Consulting party review. If the agency official proposes a finding of no adverse effect, the agency official shall notify all consulting parties of the finding and provide them with the documentation specified in § 800.11(e). The SHPO/THPO shall have 30 days from receipt to review the finding.

(June 2006)

NHDHR Determination of Eligibility / Effect (36 CFR Part 800)

Project:	Newington-Dover, NHS-027-1(37), 11238	**Inventory #:**	NWN0205
Date of group review:	December 8, 2005	**Area:**	Newington-Dover Project Area (ND)
Participants:	FHWA, NHDOT, NHDHR	**Town / City:**	Newington
Property name:	Isaac Dow House	**County:**	Rockingham
Address:	Woodbury Avenue		
Agency:	NH DOT	**Reviewed for:**	R&C

Comments: (All Newington alternatives): Section 106 and 4(f) adverse effects. Impacts will include removal of the stone retaining wall, minor slope impacts, and loss of shrubs. Impacts will also include loss of view of the property and its hilltop setting, due to extending Woodbury Avenue over the Turnpike. It is agreed that the National Register-eligible boundary consists of the parcel without the parking lot, consisting of approximately 0.285 acres.

Mitigation: In consultation with the property owner, mitigation will include rebuilding/restoring the granite slab wall in-kind, reusing as many existing slabs as possible. Leave as much of existing landscaping as feasible; plant replacement shrubs as appropriate. Plant blight-resistant elms down-slope of the house along Woodbury Avenue, in the NH DOT right-of-way.

(June 2006)

NHDHR Determination of Eligibility / Effect (36 CFR Part 800)

Project:	Newington-Dover, NHS-027-1(37), 11238	**Inventory #:**	NWN0228
Date of group review:	December 8, 2005	**Area:**	Newington-Dover Project Area (ND)
Participants:	FHWA, NHDOT, NHDHR	**Town / City:**	Newington
Property name:	Portsmouth Water Booster Station	**County:**	Rockingham
Address:	Off Spaulding Turnpike & Arboretum Drive		
Agency:	NH DOT	**Reviewed for:**	R&C

Individual Properties

NR	SR	
[x]	[x]	Eligible (district N/A)
[ ]	[ ]	Eligible, also in district
[ ]	[ ]	Eligible, only in district
[ ]	[ ]	Not evaluated for individual eligibility
[ ]	[ ]	Listed in the National or NH Registers of Historic Places

Districts

NR	SR	
[ ]	[ ]	Eligible
[ ]	[ ]	Not eligible
[x]	[x]	Not evaluated as a district
[ ]	[ ]	Listed in the National Register of Historic Places

Integrity: [x] Location [x] Design [x] Setting [x] Materials [x] Workmanship [x] Feeling [x] Association

Criteria: [x] A (Event) [ ] B (Person) [x] C (Architecture/Engineering) [ ] D (Archaeology) [ ] E (Exception)

Level: [x] Local [ ] State [ ] National

Significance: The Portsmouth Water Booster Station is significant for its historic associations with two locally important historic contexts -- the construction and effects of Pease Air Force Base, and 20th century improvements to municipal water distribution -- as well as for its architectural and engineering significance as an unaltered example of a Modern water works structure. The National Register-eligible boundary considers only the water booster station and the water storage tank; future consideration could also be given to other aspects and structures of the system, which stretched between Portsmouth and Madbury.

Eligible Acreage: 2.82 acres

36 CFR 800.5 Criteria of Effect & Adverse Effect

☒ **36 CFR 800.5(a): Apply criteria of adverse effect**. In consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified historic properties, the agency official shall apply the criteria of adverse effect to historic properties within the area of potential effects. The agency official shall consider any views concerning such effects which have been provided by consulting parties and the public.

☒ **Effect:** The undertaking may alter National Register-qualifying characteristics and features of
Section 106: [ ] location [ ] design [x] setting [ ] materials [ ] workmanship [ ] feeling [ ] association
Section 4(f): [x] use

☒ **36 CFR 800.5(a)(1): Criteria of adverse effect:** an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling and association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative. Adverse effects on historic properties include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;
(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
(iii) Removal of the property from its historic location;
(iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;
(vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
(vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

☐ **36 CFR 800.5(b): Finding of no adverse effect:** [*Otherwise adverse effects may be considered not adverse when*] the agency official, in consultation with the SHPO/THPO, may propose a finding of no adverse effect when the undertaking's effects do not meet the criteria of paragraph (a)(1) of this section or the undertaking is modified or conditions are imposed, such as the subsequent review of plans for rehabilitation by the SHPO/THPO to ensure consistency with the *Secretary's Standards for the Treatment of Historic Propertie*s (36 CFR Part 68) and applicable guidelines, to avoid adverse effects.

☐ **No historic properties affected:** there are no historic properties present ***OR*** historic properties are present, but the undertaking will not alter any characteristics that would qualify the property for the National Register.

(June 2006)

NHDHR Determination of Eligibility / Effect (36 CFR Part 800)

Project:	Newington-Dover, NHS-027-1(37), 11238	**Inventory #:**	NWN0228
Date of group review:	December 8, 2005	**Area:**	Newington-Dover Project Area (ND)
Participants:	FHWA, NHDOT, NHDHR	**Town / City:**	Newington
Property name:	Portsmouth Water Booster Station	**County:**	Rockingham
Address:	Off Spaulding Turnpike & Arboretum Drive		
Agency:	NH DOT	**Reviewed for:**	R&C

36 CFR 800.5(c): Consulting party review. If the agency official proposes a finding of no adverse effect, the agency official shall notify all consulting parties of the finding and provide them with the documentation specified in § 800.11(e). The SHPO/THPO shall have 30 days from receipt to review the finding.

Comments: (All Newington alternatives) Section 106 and 4(f) adverse effects. Impacts result from acquisition of a portion of the property; however, the effect will be superficial on the property as a whole because the buildings will not be affected, and will continue to be masked by the remaining tree screen. Therefore, additional research on the entire system will not be necessary unless other impacts occur.

Mitigation: Mitigation has already been accomplished, consisting of historical documentation and maintaining the tree screen.

Appendix H – Air Quality Technical Information

- MOBILE6.2 Input Files
- MOBILE6.2 Output Summary
- Peak Hour Traffic Summary
  - Newington
  - Dover
- Microscale Intersection Maps
  - Newington
  - Dover
- CAL3QHC Input Files
  - Newington
  - Dover
- Microscale Results Summary
  - Newington
  - Dover

MOBILE6.2 Input Files

NH03CO.in

```
MOBILE6 INPUT FILE :
> FILE NAME: NH03CO.in
> DATE: 7/8/03
> CREATED BY: DHS
> BASIC NEW HAMPSHIRE INPUT FILE FOR MOBILE6
> NON-ATTAINMENT AREA
> WINTER SEASON
> 2003 MOBILE SOURCE EMISSIONS (FOR PROJECTION OF EMISSIONS IN 2003)
> RFG, NLEV, ESI(ATP), TIER 2
* Make sure that Report File matches the Input File
REPORT FILE        : NH03CO.txt
POLLUTANTS         : HC CO NOx
RUN DATA
NO REFUELING       :
> NEW HAMPSHIRE DATA FOR MIN/MAX TEMP, FUEL RVP, VMT FRACTIONS, ESI/ATP, FUEL, SEASON
MIN/MAX TEMP       : 30. 30.
FUEL RVP           : 6.8
EXPRESS HC AS VOC  :

*New Hampshire Vehicle Registration Distribution Input (External File) If * then default values used
REG DIST           : NHallage.d
*New Hampshire specific VMT mix based on 1999 HPMS adjusted from M5 to M6 shown below If * then
default values used
VMT FRACTIONS      :
0.470  0.081  0.269  0.068  0.031  0.025  0.003  0.002
0.001  0.005  0.006  0.007  0.026  0.001  0.001  0.004

*New Hampshire ESI Program is ATP
ANTI-TAMP PROG     :
99 80 50 22222 11111111 1 11 096. 22211122
*New Hampshire specific fuel program shown below (2 N for RFG, 1 for Conventional East)
FUEL PROGRAM       : 2 N
*NEW Hampshire Season of interest (1 for summer, 2 for winter)
SEASON             : 2
> Scenario(s) being modeled includes area, road class, type, speed, year, month

SCENARIO RECORD    : Scenario Title : NH speed 2.5
> 2003 Speed 2.5 mph (Arterial)
* This text is for annotating this file and is otherwise ignored.
CALENDAR YEAR      : 2003
EVALUATION MONTH   : 1
ALTITUDE           : 1
AVERAGE SPEED      : 2.5 Arterial 0.0 100.0 0.0 0.0

….through….

 SCENARIO RECORD    : Scenario Title : NH speed 60.73
> 2003 Speed 60.73 mph (Freeway)
* This text is for annotating this file and is otherwise ignored.
CALENDAR YEAR      : 2003
EVALUATION MONTH   : 1
ALTITUDE           : 1
AVERAGE SPEED      : 60.73 Freeway 92.0 0.0 0.0 8.0
```

NH13CO.in

```
MOBILE6 INPUT FILE :
> FILE NAME: NH13CO.in
> DATE: 7/8/03
> CREATED BY: DHS
> BASIC NEW HAMPSHIRE INPUT FILE FOR MOBILE6
> NON-ATTAINMENT AREA
> WINTER SEASON
> 2013 MOBILE SOURCE EMISSIONS (FOR PROJECTION OF EMISSIONS IN 2013)
> RFG, NLEV, ESI(ATP), TIER 2
* Make sure that Report File matches the Input File
REPORT FILE        : NH13CO.txt
POLLUTANTS         : HC CO NOx
RUN DATA
NO REFUELING       :
> NEW HAMPSHIRE DATA FOR MIN/MAX TEMP, FUEL RVP, VMT FRACTIONS, ESI/ATP, FUEL, SEASON
MIN/MAX TEMP       : 30. 30.
FUEL RVP           : 6.8
EXPRESS HC AS VOC  :

*New Hampshire Vehicle Registration Distribution Input (External File) If * then default values used
REG DIST           : NHallage.d
*New Hampshire specific VMT mix based on 1999 HPMS adjusted from M5 to M6 shown below If * then
default values used
VMT FRACTIONS      :
0.470  0.081  0.269  0.068  0.031  0.025  0.003  0.002
0.001  0.005  0.006  0.007  0.026  0.001  0.001  0.004

*New Hampshire ESI Program is ATP
ANTI-TAMP PROG     :
99 80 50 22222 11111111 1 11 096. 22211122
*New Hampshire specific fuel program shown below (2 N for RFG, 1 for Conventional East)
FUEL PROGRAM       : 2 N
*NEW Hampshire Season of interest (1 for summer, 2 for winter)
SEASON             : 2
> Scenario(s) being modeled includes area, road class, type, speed, year, month

SCENARIO RECORD    : Scenario Title : NH speed 2.5
> 2013 Speed 2.5 mph (Arterial)
* This text is for annotating this file and is otherwise ignored.
CALENDAR YEAR      : 2013
EVALUATION MONTH   : 1
ALTITUDE           : 1
AVERAGE SPEED      : 2.5 Arterial 0.0 100.0 0.0 0.0

….through….

SCENARIO RECORD    : Scenario Title : NH speed 60.73
> 2013 Speed 60.73 mph (Freeway)
* This text is for annotating this file and is otherwise ignored.
CALENDAR YEAR      : 2013
EVALUATION MONTH   : 1
ALTITUDE           : 1
AVERAGE SPEED      : 60.73 Freeway 92.0 0.0 0.0 8.0
```

NH25CO.in

```
MOBILE6 INPUT FILE :
> FILE NAME: NH25CO.in
> DATE: 7/8/03
> CREATED BY: DHS
> BASIC NEW HAMPSHIRE INPUT FILE FOR MOBILE6
> NON-ATTAINMENT AREA
> WINTER SEASON
> 2025 MOBILE SOURCE EMISSIONS (FOR PROJECTION OF EMISSIONS IN 2025)
> RFG, NLEV, ESI(ATP), TIER 2

* Make sure that Report File matches the Input File
REPORT FILE        : NH25CO.txt
POLLUTANTS         : HC CO NOx
RUN DATA
NO REFUELING       :
> NEW HAMPSHIRE DATA FOR MIN/MAX TEMP, FUEL RVP, VMT FRACTIONS, ESI/ATP, FUEL, SEASON
MIN/MAX TEMP       : 30. 30.
FUEL RVP           : 6.8
EXPRESS HC AS VOC  :
*New Hampshire Vehicle Registration Distribution Input (External File) If * then default values used
REG DIST           : NHallage.d

*New Hampshire specific VMT mix based on 1999 HPMS adjusted from M5 to M6 shown below If * then
default values used
VMT FRACTIONS      :
0.470  0.081  0.269  0.068  0.031  0.025  0.003  0.002
0.001  0.005  0.006  0.007  0.026  0.001  0.001  0.004
*New Hampshire ESI Program is ATP
ANTI-TAMP PROG     :
99 80 50 22222 11111111 1 11 096. 22211122
*New Hampshire specific fuel program shown below (2 N for RFG, 1 for Conventional East)
FUEL PROGRAM       : 2 N
*NEW Hampshire Season of interest (1 for summer, 2 for winter)
SEASON             : 2
> Scenario(s) being modeled includes area, road class, type, speed, year, month

SCENARIO RECORD    : Scenario Title : NH speed 2.5
> 2025 Speed 2.5 mph (Arterial)
* This text is for annotating this file and is otherwise ignored.
CALENDAR YEAR      : 2025
EVALUATION MONTH   : 1
ALTITUDE           : 1
AVERAGE SPEED      : 2.5 Arterial 0.0 100.0 0.0 0.0

….through….

SCENARIO RECORD    : Scenario Title : NH speed 60.73
> 2025 Speed 60.73 mph (Freeway)
* This text is for annotating this file and is otherwise ignored.
CALENDAR YEAR      : 2025
EVALUATION MONTH   : 1
ALTITUDE           : 1
AVERAGE SPEED      : 60.73 Freeway 92.0 0.0 0.0 8.0
```

MOBILE6.2 Output Summary

New Hampshire 2003 Winter
Mobile 6.2 Emission Factors

Arterial		Freeway	
Vehicle Speed (mph)	Carbon Monoxide Emission Factor (g/veh-mile)	Vehicle Speed (mph)	Carbon Monoxide Emission Factor (g/veh-mile)
2.5	64.93	2.7	62.57
3	57.32	3	58.35
4	47.82	4	48.84
5	42.11	5	43.14
6	38.48	6	39.20
7	35.89	7	36.31
8	33.95	8	34.14
9	32.43	9	32.46
10	31.22	10	31.11
11	30.32	11	30.06
12	29.56	12	29.26
13	28.92	13	28.58
14	28.37	14	28.00
15	27.89	15	27.49
16	27.46	16	27.12
17	27.09	17	26.93
18	26.75	18	26.77
19	26.45	19	26.62
20	26.18	20	26.49
21	25.95	21	26.37
22	25.75	22	26.27
23	25.56	23	26.17
24	25.39	24	26.07
25	25.24	25	25.99
26	25.14	26	25.91
27	25.05	27	25.84
28	24.96	28	25.78
29	24.88	29	25.71
30	24.81	30	25.66
31	24.82	31	25.65
32	24.83	32	25.67
33	24.84	33	25.68
34	24.85	34	25.70
35	24.86	35	25.72
36	25.03	36	25.88
37	25.18	37	26.03
38	25.33	38	26.18
39	25.47	39	26.32
40	25.60	40	26.47
41	25.77	41	26.64
42	25.93	42	26.80
43	26.08	43	26.95
44	26.22	44	27.10
45	26.36	45	27.28
46	26.53	46	27.45
47	26.69	47	27.61
48	26.85	48	27.77
49	27.00	49	27.94
50	27.14	50	28.13
51	27.32	51	28.30
52	27.49	52	28.47
53	27.65	53	28.65
54	27.80	54	28.85
55	27.95	55	29.04
56	28.14	56	29.23
57	28.32	57	29.42
58	28.49	58	29.63
59	28.66	59	29.84
60	28.82	60	30.04
61	29.01	60.7	30.18
62	29.20		
63	29.38		
64	29.55		
65	29.72		

NOTE: Emission factors were calculated by MOBILE6.2 and represent a composite vehicle type during winter conditions.

New Hampshire 2013 Winter
Mobile 6.2 Emission Factors

Arterial		Freeway	
Vehicle Speed (mph)	Carbon Monoxide Emission Factor (g/veh-mile)	Vehicle Speed (mph)	Carbon Monoxide Emission Factor (g/veh-mile)
2.5	40.05	2.7	38.38
3	35.48	3	35.85
4	29.77	4	30.13
5	26.34	5	26.70
6	24.10	6	24.28
7	22.50	7	22.48
8	21.30	8	21.13
9	20.37	9	20.08
10	19.63	10	19.24
11	19.04	11	18.58
12	18.56	12	18.06
13	18.15	13	17.62
14	17.79	14	17.24
15	17.49	15	16.92
16	17.22	16	16.68
17	16.97	17	16.57
18	16.76	18	16.47
19	16.57	19	16.39
20	16.40	20	16.31
21	16.26	21	16.24
22	16.13	22	16.18
23	16.01	23	16.12
24	15.90	24	16.06
25	15.80	25	16.01
26	15.74	26	15.97
27	15.68	27	15.93
28	15.63	28	15.89
29	15.58	29	15.85
30	15.53	30	15.82
31	15.54	31	15.82
32	15.55	32	15.83
33	15.56	33	15.84
34	15.56	34	15.85
35	15.57	35	15.86
36	15.68	36	15.97
37	15.78	37	16.07
38	15.88	38	16.17
39	15.97	39	16.26
40	16.05	40	16.36
41	16.16	41	16.47
42	16.27	42	16.57
43	16.37	43	16.67
44	16.46	44	16.76
45	16.55	45	16.88
46	16.66	46	16.99
47	16.77	47	17.10
48	16.87	48	17.20
49	16.96	49	17.31
50	17.06	50	17.43
51	17.17	51	17.54
52	17.27	52	17.64
53	17.38	53	17.76
54	17.48	54	17.89
55	17.57	55	18.01
56	17.69	56	18.13
57	17.81	57	18.26
58	17.92	58	18.39
59	18.02	59	18.52
60	18.13	60	18.65
61	18.25	60.7	18.74
62	18.37		
63	18.48		
64	18.59		
65	18.70		

NOTE: Emission factors were calculated by MOBILE6.2 and represent a composite vehicle type during winter conditions.

New Hampshire 2025 Winter
Mobile 6.2 Emission Factors

Arterial		Freeway	
Vehicle Speed (mph)	Carbon Monoxide Emission Factor (g/veh-mile)	Vehicle Speed (mph)	Carbon Monoxide Emission Factor (g/veh-mile)
2.5	32.02	2.7	30.70
3	28.45	3	28.72
4	24.00	4	24.27
5	21.33	5	21.60
6	19.57	6	19.70
7	18.32	7	18.28
8	17.37	8	17.22
9	16.64	9	16.39
10	16.06	10	15.73
11	15.59	11	15.20
12	15.21	12	14.79
13	14.88	13	14.44
14	14.60	14	14.14
15	14.36	15	13.88
16	14.14	16	13.69
17	13.95	17	13.61
18	13.78	18	13.53
19	13.63	19	13.46
20	13.49	20	13.40
21	13.38	21	13.35
22	13.27	22	13.29
23	13.18	23	13.25
24	13.09	24	13.21
25	13.01	25	13.17
26	12.96	26	13.13
27	12.92	27	13.10
28	12.88	28	13.07
29	12.84	29	13.04
30	12.80	30	13.01
31	12.80	31	13.01
32	12.81	32	13.02
33	12.81	33	13.02
34	12.82	34	13.03
35	12.82	35	13.04
36	12.90	36	13.12
37	12.98	37	13.20
38	13.06	38	13.28
39	13.13	39	13.35
40	13.20	40	13.43
41	13.28	41	13.51
42	13.36	42	13.59
43	13.44	43	13.67
44	13.51	44	13.74
45	13.58	45	13.83
46	13.67	46	13.92
47	13.75	47	14.00
48	13.83	48	14.08
49	13.91	49	14.17
50	13.98	50	14.26
51	14.06	51	14.35
52	14.15	52	14.43
53	14.23	53	14.52
54	14.31	54	14.63
55	14.38	55	14.72
56	14.48	56	14.82
57	14.57	57	14.92
58	14.66	58	15.02
59	14.74	59	15.13
60	14.82	60	15.23
61	14.92	60.7	15.30
62	15.02		
63	15.11		
64	15.19		
65	15.28		

NOTE: Emission factors were calculated by MOBILE6.2 and represent a composite vehicle type during winter conditions.

Peak Hour Traffic Summary

Newington

'Newington ' 60
'2003 Existing' Using 2.1% growth rate from traffic section of report

Free Flow Links	2003 Existing	2013 No Build	2025 No Build
WdbryAve1'	1525	1877	2409
'Rt16SBoffRamp1'	715	880	1129
'Rt16SBOffRamp2'	715	880	1129
'Rte16SBOffRamp3'	715	880	1129
'Rte16SBOffRamp4'	715	880	1129
'Rte16NBOnRamp'	760	936	1201
'Rte16NBOnRamp2'	760	936	1201
'Rte16NBOnRamp3'	760	936	1201
'Rte16NBOnRamp4'	760	936	1201
WdbryAve2'	810	997	1280
'PattersonLne1'	135	166	213
'PattersonLne2'	135	166	213
'PattersonLne3'	135	166	213
'PattersonLne4'	110	135	174
'PattersonLne5'	15	18	24
'PattersonLne6'	10	12	16
'ShattuckWay1'	10	12	16
'ShattuckWay2'	10	12	16
'ShattuckWay3'	10	12	16
'ShattuckWay4'	10	12	16
Driveway'	115	142	182
RiverRd'	205	252	324
RteNB1'	3155	3884	4984
RteNB2'	3155	3884	4984
RteNB3'	3155	3884	4984
RteNB4'	3155	3884	4984
Rte16NB5'	3155	3884	4984
Rte16SB1'	1590	1957	2512
Rte16SB2'	1590	1957	2512
Rte16SB3'	1590	1957	2512
FoxRunRd'	10	12	16
FoxRunRd2'	10	12	16
FoxRunRd3'	10	12	16
FoxRunRd4'	10	12	16
FoxRunRd5'	10	12	16

NewingtonAlt12A' Using 2.1% growth rate from traffic section of report

#	Queue Links	2025 Build PM Peak	2013 Build PM Peak
1	'WdbryWBthruatNBRamps'	210	164
2	'WdbryEBthruatNBRamps'	555	432
3	'WdbryEBlftatNBRamps'	740	577
4	'NBOffRampatWdbryAve'	165	129
5	WdbryWBatSBRamps'	235	183
6	'WdbryEBlftatSBRamps'	75	58
7	'WdbryEBthruatSBRamps'	625	487
8	SBOffRampLeft'	670	522
9	SBOffRampRight'	250	195
10	WdbryWBatRvrRd'	445	347
11	RvrRdSBatWdbry'	270	210
12	RvrRdNBatWdbry'	580	452
	Free Flow		
1	WoodburyAveExt1'	2185	1703
2	WoodburyAveExt2'	2185	1703
3	WoodburyAveExt3'	1090	849
4	WoodburyAveExt4'	1530	1192
5	WoodburyAveExt5'	1530	1192
6	WoodburyAveExt6'	1530	1192
7	WoodburyAveExt7'	1530	1192
8	WoodburyAveExt8'	1145	892
9	Rte16NB1'	3850	3000
10	Rte16NB2'	3850	3000
11	Rte16SB1'	1640	1278
12	Rte16SB2'	1755	1368
13	NBOffRamp1'	165	129
14	NBoffRamp2'	165	129
15	NBOffRamp3'	165	129
16	NBOffRamp4'	165	129
17	NBOnRamp1'	555	432
18	NBOnRamp2'	555	432
19	NBOnRamp3'	555	432
20	NBOnRamp4'	1095	853
21	NBOnRamp5'	1095	853
22	NBOnRamp6'	1650	1286
23	SBOnRamp1'	115	90
24	SBOnRamp2'	115	90
25	SBOnRamp3'	115	90
26	SBOnRamp4'	115	90
27	SBOnRamp5'	115	90
28	SBOnRamp6'	115	90
29	SBOnRamp7'	115	90
30	SBOnRamp8'	115	90
31	SBOnRamp9'	115	90
32	SBOffRamp1'	920	717
33	SBOffRamp2'	920	717
34	SBOffRamp3'	920	717
35	SBOffRamp4'	920	717
36	SBOffRamp5'	920	717
37	RiverRdCon1'	950	740
38	RiverRdCon2'	950	740
39	RiverRdCon3'	955	744
40	RiverRdCon4'	955	744
41	RiverRdCon5'	955	744
42	RiverRdCon6'	490	382
43	RiverRdCon7'	490	382
44	RiverRdCon8'	490	382
45	RiverRdCon9'	490	382
46	RiverRdCon10'	375	292
47	ConRd1'	117	91
48	ConRd2'	117	91
49	ConRd3'	117	91
50	ConRd4'	117	91
51	ConRd5'	117	91
52	ConRd6'	117	91
53	ArbDrve1'	20	16
54	ArbDrve2'	20	16
55	ArbDrve3'	20	16
56	ArbDrve4'	20	16
57	ArbDrve5'	20	16
58	ArbDrve6'	20	16

'2025 Newington Alt 13 Using 2.1% growth rate from traffic section of report

#	Queue Links	2025 Build PM Peak	2013 Build PM Peak
1	NBOffRamplftrt'	165	129
2	WdbryAveEB'	20	16
3	WdbryWBthru'	700	545
4	WdbryWBLft'	555	432
5	ArborSB'	25	19
6	SBOffRampNB'	1070	834
7	ArborEBLft'	20	16
8	ArborEBthrght'	580	452
9	WdbryWBLft'	20	16
10	Wdbrythrght'	25	19
	Free Flow		
1	Rte16NB1'	3850	3000
2	Rte16NB2'	3850	3000
3	Rte16SB1'	1710	1333
4	Rte16SB2'	1710	1333
5	WdbryAve1'	2035	1586
6	WdbryAve2'	860	670
7	WdbryAveExt1'	1300	1013
8	WdbryAveExt2'	1300	1013
9	WdbryAveExt3'	1300	1013
10	WdbryAveExt4'	1300	1013
11	WdbryAveExt5'	1300	1013
12	WdbryAveExt6'	1300	1013
13	WdbryAveExt7'	1300	1013
14	WdbryAveExt8'	1300	1013
15	WdbryAveExt9'	1300	1013
16	WdbryAveExt10'	1300	1013
17	WdbryAveExt11'	1300	1013
18	WdbryAveExt12'	1300	1013
19	WdbryAveExt13'	1300	1013
20	Arbor1'	995	775
21	Arbor2'	995	775
22	Arbor3'	995	775
23	Arbor4'	995	775
24	Arbor5'	995	775
25	arbor6'	70	55
26	arbor7'	70	55
27	arbor8'	70	55
28	arbor9'	70	55
29	arbor10'	70	55
30	arbor11'	70	55
31	arbor12'	70	55
32	arbor13'	70	55
33	'SBOffRamptoWdbryExt1'	695	542
34	'SBOffRamptoWdbryExt2'	695	542
35	'SBOffRamptoWdbryExt3'	695	542
36	SBOnRamp1'	45	35
37	SBOnRamp2'	45	35
38	SBOnRamp3'	45	35
39	SBOnRamp4'	45	35
40	SBOnRamp5'	45	35
41	SBOnRamp6'	45	35
42	SBOnRamp7'	45	35
43	SBOffRamp1'	1070	834
44	SBOffRamp2'	1070	834
45	SBOffRamp3'	1070	834
46	SBOffRamp4'	1070	834
47	SBOffRamp5'	1070	834
48	SBOffRamp6'	1070	834
49	NBOffRamp1'	165	129
50	NBOffRamp2'	165	129
51	NBOffRamp3'	165	129
52	NBOffRamp4'	165	129
53	NBOnRamp1'	1730	1348
54	NBOnRamp2'	1730	1348
55	NBOnRamp3'	1730	1348
56	NBOnRamp4'	1730	1348
57	WdbrytoNBOnRamp1'	555	432
58	WdbrytoNBOnRamp2'	555	432

Dover

'Newington Dover Route
Dover Existing'

Using 2.1% growth rate from traffic section of report

Free Flow Links	2003 Existing	2013 No Build	2025 No Build
'Route 16 Southbound1'	1200	1477	1896
'Route 16 Northbound1'	4110	5059	6492
DoverPointRd1'	1185	1459	1872
DoverPointRd2'	1185	1459	1872
DoverPointRd3'	1185	1459	1872
DoverPointRd4'	1185	1459	1872
DoverPointRd5'	10	12	16
DoverPointRd6'	10	12	16
DoverPointRd7'	15	18	24
Rte4RamptoDPRd1'	5	6	8
Rte4RamptoDPRd2'	5	6	8
Rte4RamptpDPRd3'	5	6	8
Route4 1'	470	579	742
Route 4 2'	470	579	742
Route4 3'	1475	1816	2330
Route4 4'	1210	1490	1911
Route 4 5'	1210	1490	1911
Route4 6'	1210	1490	1911
Route4 7'	2055	2530	3246
'Rt16NBOffRmptoRt4Ea1'	705	868	1114
'Rt16NBoffRmptoRt4Ea2'	710	874	1122
'Rt16NBOffRmptoRt4Ea3'	710	874	1122
'Rt16NBOffRmptoRt4Ea4'	710	874	1122
'Rt16NBOffRmptoRt4Ea5'	710	874	1122
'Rt16NBOffRmptoRt4Ea6'	710	874	1122
'Rt16NBOffRmptoRt4Ea7'	710	874	1122
'Rt16NBOffRmptoRt4Ea8'	710	874	1122
'Rt16NBOffRmptoRt4We1'	1025	1262	1619
'Rt16NBOffRmptoRt4We2'	1025	1262	1619
'Rt16NBOffRmptoRt4We3'	1025	1262	1619
'Rt16NBOffRmptoRt4We4'	1025	1262	1619
'Rt16NBOffRmptoRt4We5'	1025	1262	1619
'Rt16NBOffRmptoRt4We6'	1025	1262	1619
'Rt16NBOffRmptoRt4We7'	1025	1262	1619
'Rt16NBOffRmptoRt4We8'	1025	1262	1619
'Rt16NBOffRmptoRt4We9'	1025	1262	1619
'R16NBOffRmptoRt4We10'	1025	1262	1619
'R16NBOffRmptoRt4We11'	1025	1262	1619
'R16NBOffRmptoRt4We12'	1025	1262	1619
'R16NBOffRmptoRt4We13'	1025	1262	1619
'R16SBOffRmptoSpurRd1'	40	49	63
'R16SBOffRmptoSpurRd2'	40	49	63
'R16SBOffRmptoSpurRd3'	40	49	63
'R16SBOffRmptoSpurRd4'	40	49	63
'R16SBOffRmptoSpurRd5'	40	49	63
'R16SBOffRmptoSprRdNB'	20	25	32
'R16SBOffRmptoSprRdSB'	20	25	32
SpurRd1'	30	37	47
SpurRd2'	30	37	47
SpurRd3'	30	37	47
SpurRd4'	30	37	47
SpurRd5'	50	62	79
SpurRd6'	50	62	79
SpurRd7'	50	62	79
SpurRd8'	50	62	79
SpurRd9'	50	62	79
SpurRd10'	50	62	79
SpurRd11'	50	62	79
BHRd1'	15	18	24
BHRd2'	15	18	24
BHRd3'	20	25	32
BHRd4'	20	25	32
BHRd5'	20	25	32
BHRd6'	20	25	32
BHRdtoRt4East'	5	6	8
'Rt4OnRmptoRt16SB1'	845	1040	1335
'Rt4OnRamptoRt16SB2'	845	1040	1335
'Rt4OnRamptoRt16SB3'	845	1040	1335
'Rt4OnRamptoRt16SB4'	845	1040	1335
'Rt16SOffRamptoRt4Ea1'	265	326	419
'Rt16SOffRamptoRt4Ea2'	265	326	419
'Rt16SOffRamptoRt4Ea3'	265	326	419
'Rt16SOffRmptoRt4Ea4'	265	326	419
'Rt16SOffRmptoRt4Ea5'	265	326	419
'Rte16SBOnOffRamp1'	1110	1366	1753
'Rte16SBOnOffRamps2'	1110	1366	1753

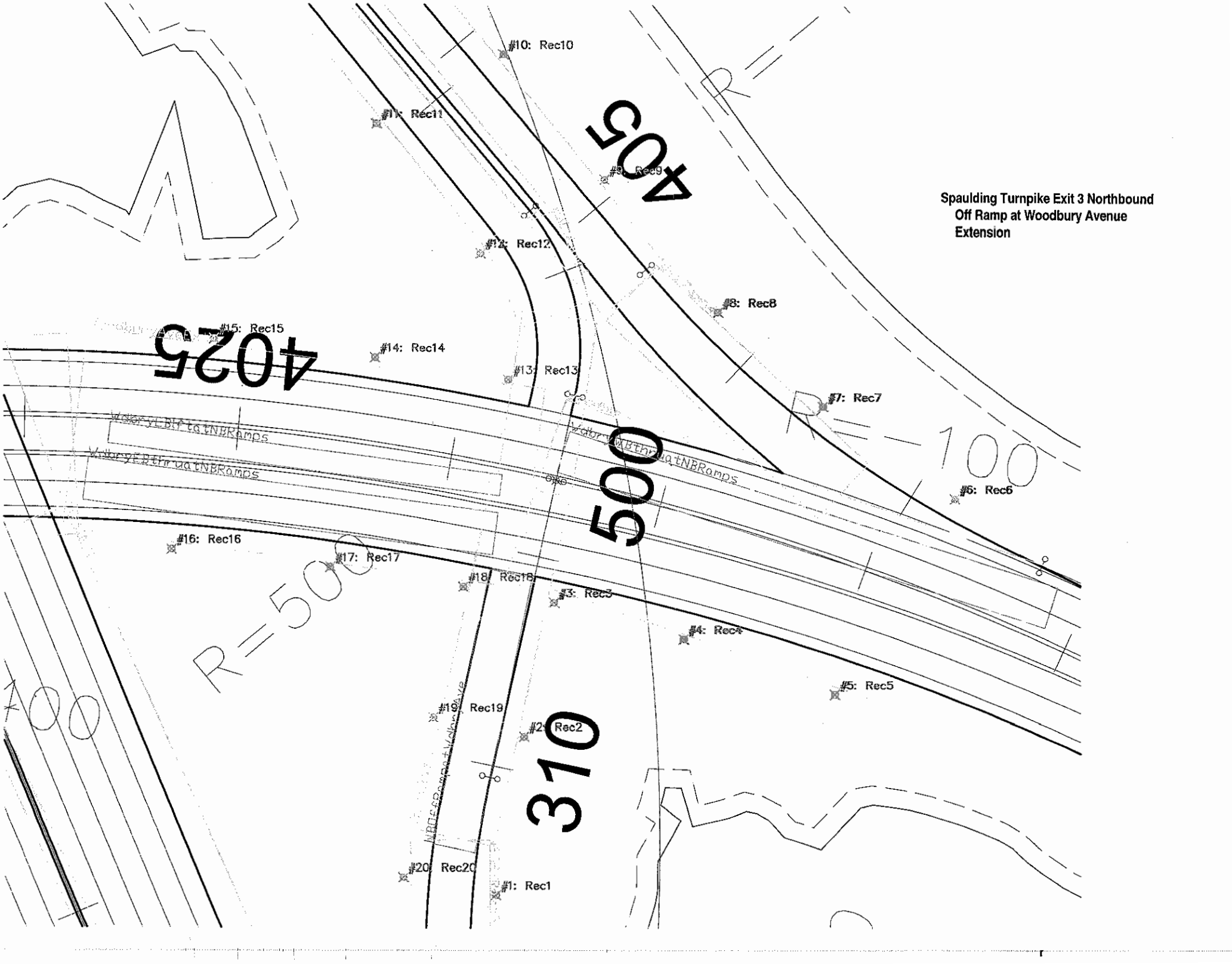
Newington Dover Route 16 'Alternative2 2025 Dover

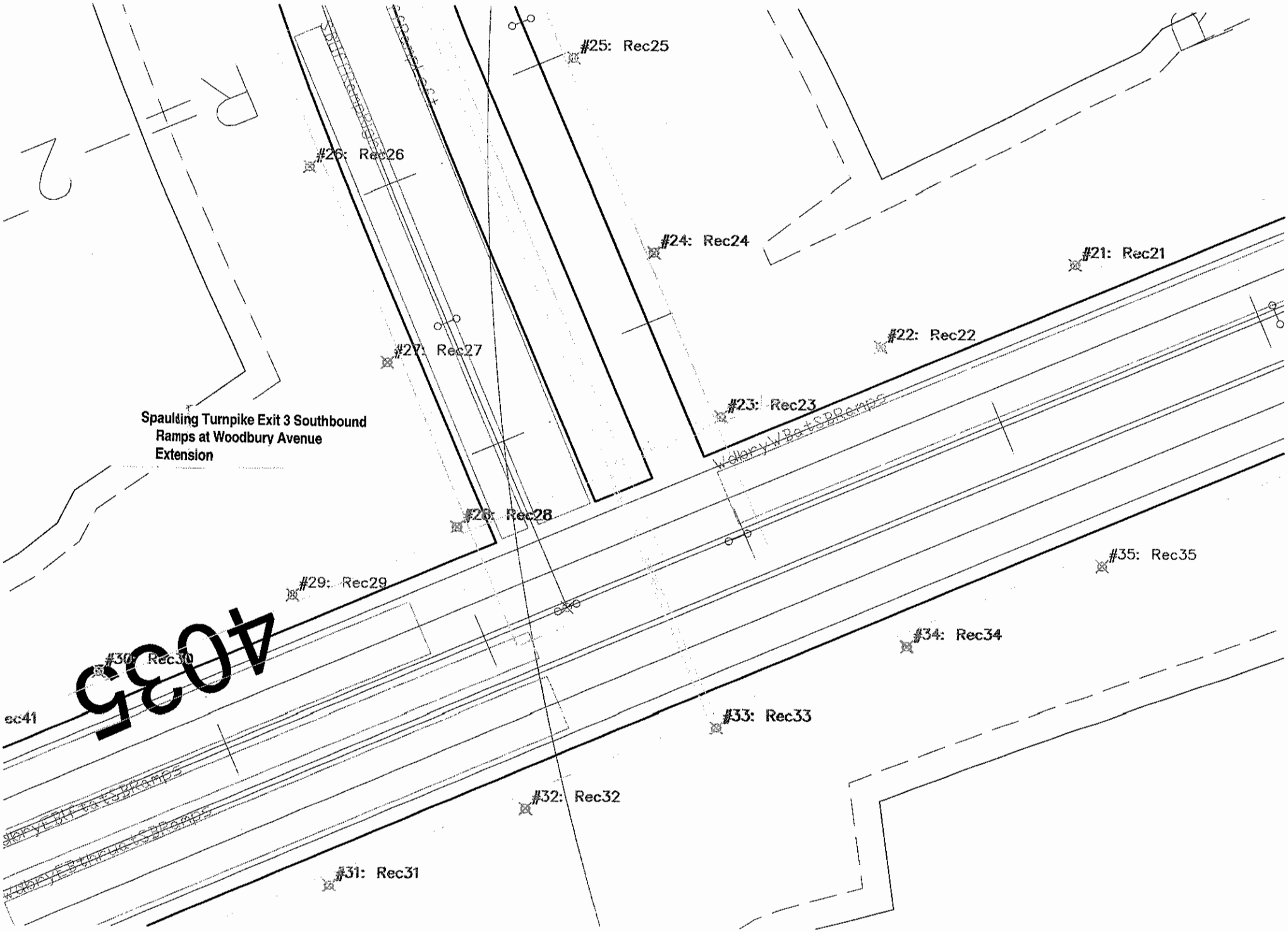
Using 2.1% growth rate from traffic section of report

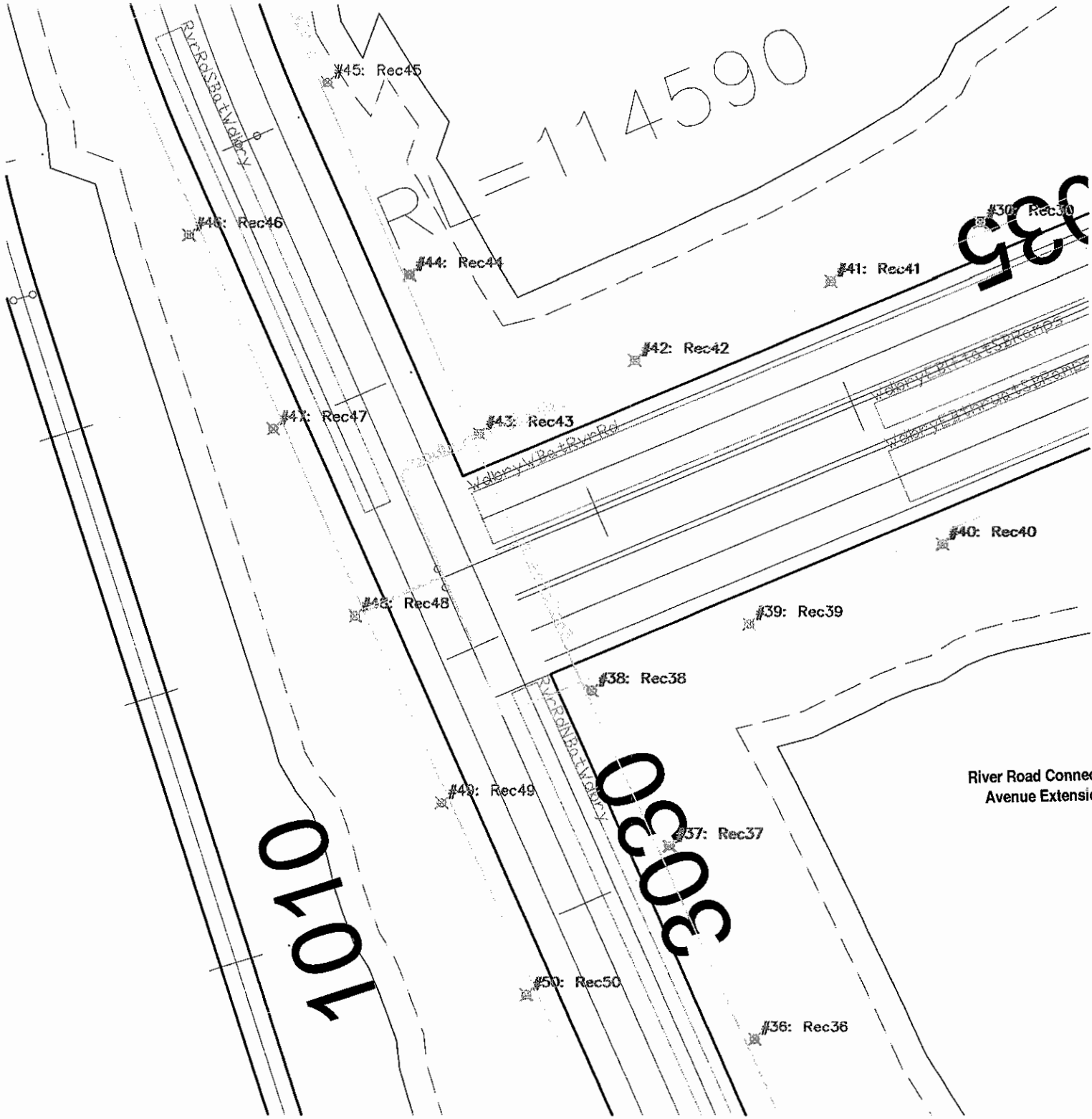
#	**Queue Links**	2025 Build PM Peak	2013 Build PM Peak
1	DP WB thru at Rte4'	695	542
2	DP WB left at Rte4'	5	4
3	'DP NB lft rght Rte4'	15	12
4	Rte 4 EB at DP Rd'	1370	1068
5	'Rte4WBthruatNBoffrmp'	680	530
6	'Rte4EBthruatNBoffrmp'	300	234
7	'Rte4EBlftatNBofframp'	25	19
8	'NBoffRampLeft at Rt4'	1500	1169
9	NBoffRmpRghtatRte4'	1070	834
10	'Rte4WBlftatSBonRamp'	505	394
11	'Rte4WBthruatSBOnRamp'	1675	1305
12	'Rte4SBthruatSBOnRamp'	325	253
	Free Flow Links		
1	'Route 16 Southbound1'	1610	1255
2	'Route 16 Northbound1'	3280	2556
3	DoverpointRd1'	2065	1609
4	DoverpointRd2'	30	23
5	'Rte4 btwn DPRd NBoff'	2075	1617
6	'Rte4 btwn NBoff SBon'	2505	1952
7	'Rte4 btwn SBon BHRd'	2000	1559
8	Rte16NBoffRamp1'	2570	2003
9	Rte16NBoffRamp2'	2570	2003
10	Rte16SBOnRamp'	505	394
11	Rte16NBOnRamp'	50	39
12	Doverpoint Rd1b'	2065	1609
13	Doverpoint Rd 1c'	2065	1609
14	Doverpoint Rd2b'	30	23
15	Doverpoint Rd2c'	30	23
16	Doverpoint Rd1d'	2065	1609
17	Rte16NBoffRamp3'	2570	2003
18	Rte16NBoffRamp4'	2570	2003
19	'Rte4btwn SBon BHRd2'	2810	2190
20	'Rte4 btwn SBon BHRd3'	2810	2190
21	Rte16SBOnRamp2'	810	631
22	Rte16SBOnRamp3'	810	631
23	Rte16SBOnRamp4'	810	631
24	Rte16SBOnRamp5'	810	631
25	Spur Rd 1'	180	140
26	Spur Rd 2'	180	140
27	Spur Rd 3'	180	140
28	Spur Rd 4'	180	140
29	Spur Rd 5'	180	140
30	Spur Rd 6'	180	140
31	BostonHarborRd1'	210	164
32	BostonHarborRd2'	210	164
33	BostonHarborRd3'	210	164
34	'Rte4 btwn SBOn BHRd4'	2670	2081

Microscale Intersection Maps

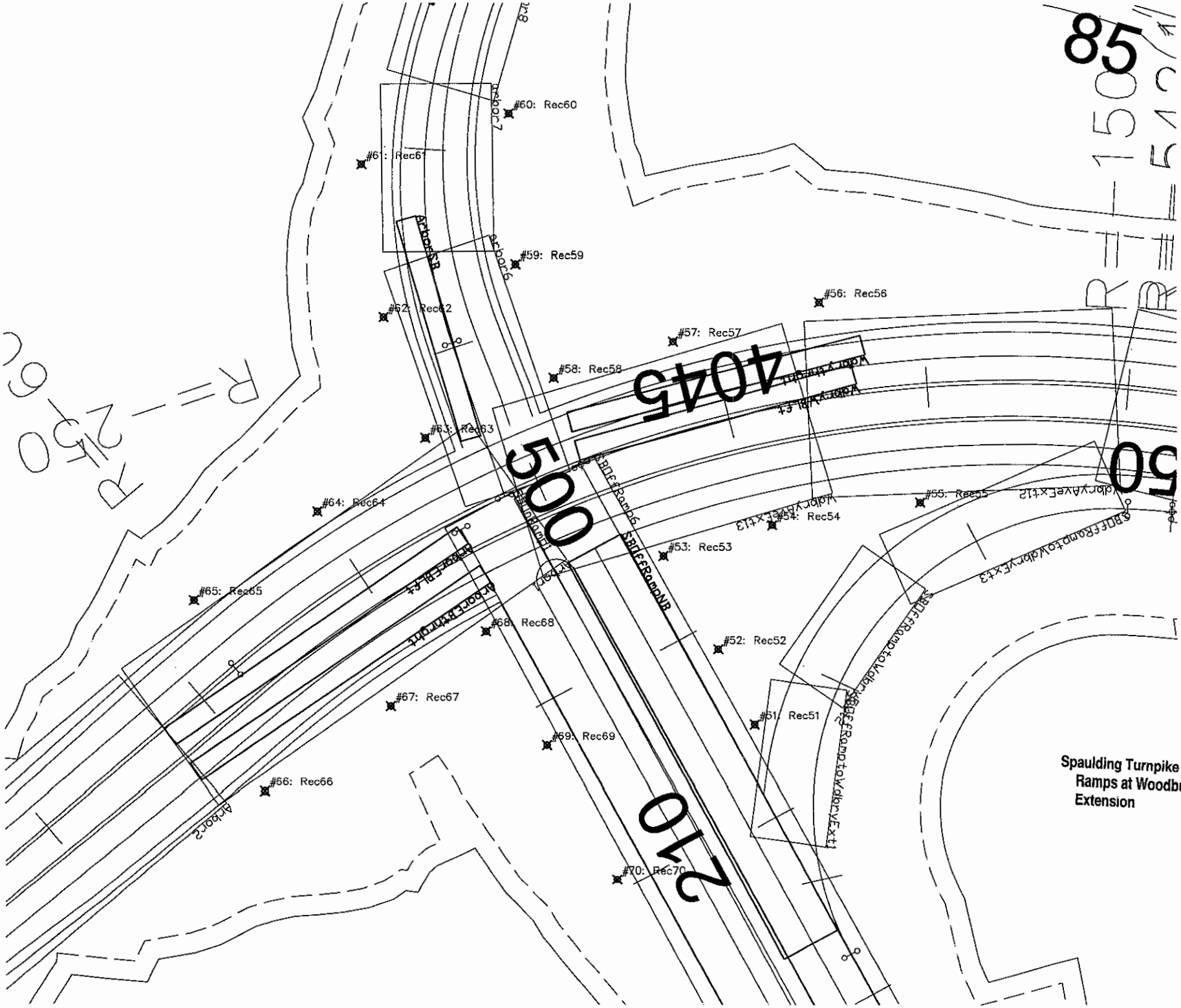
Newington


Spaulding Turnpike Exit 3 Northbound
Off Ramp at Woodbury Avenue
Extension
#10: Rec10
#11: Rec11
#9: Rec9
#12: Rec12
#8: Rec8
#15: Rec15
#14: Rec14
#13: Rec13
#7: Rec7
#6: Rec6
#16: Rec16
#17: Rec17
#18: Rec18
#3: Rec3
#4: Rec4
#5: Rec5
#19: Rec19
#2: Rec2
#20: Rec20
#1: Rec1
405
4025
500
310
R=500
R=100
700

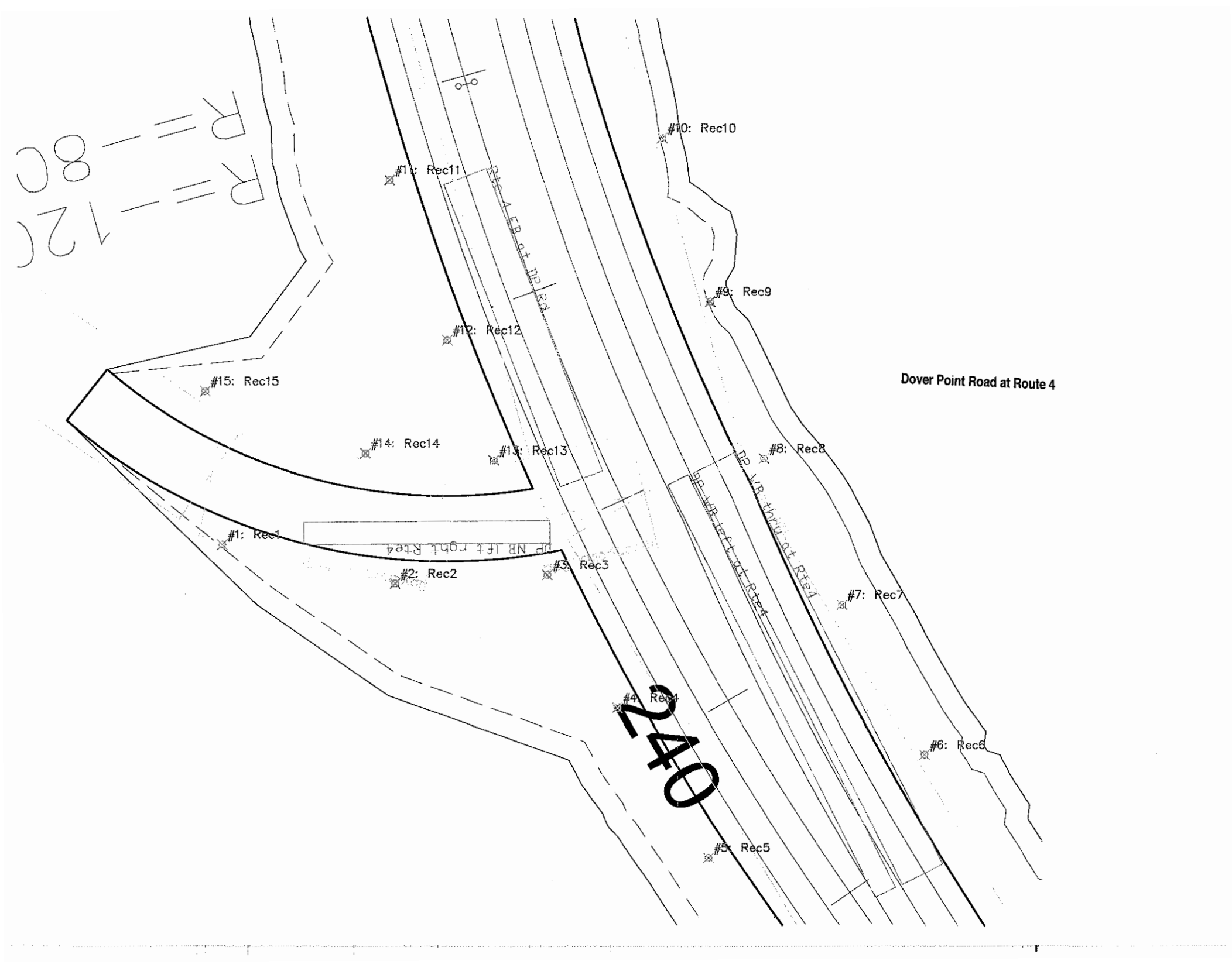

#25: Rec25
#26: Rec26
#24: Rec24
#21: Rec21
#27: Rec27
#22: Rec22
#23: Rec23
Spaulding Turnpike Exit 3 Southbound
Ramps at Woodbury Avenue
Extension
#28: Rec28
#35: Rec35
#29: Rec29
#34: Rec34
#30: Rec30
4035
ec41
#33: Rec33
#32: Rec32
#31: Rec31

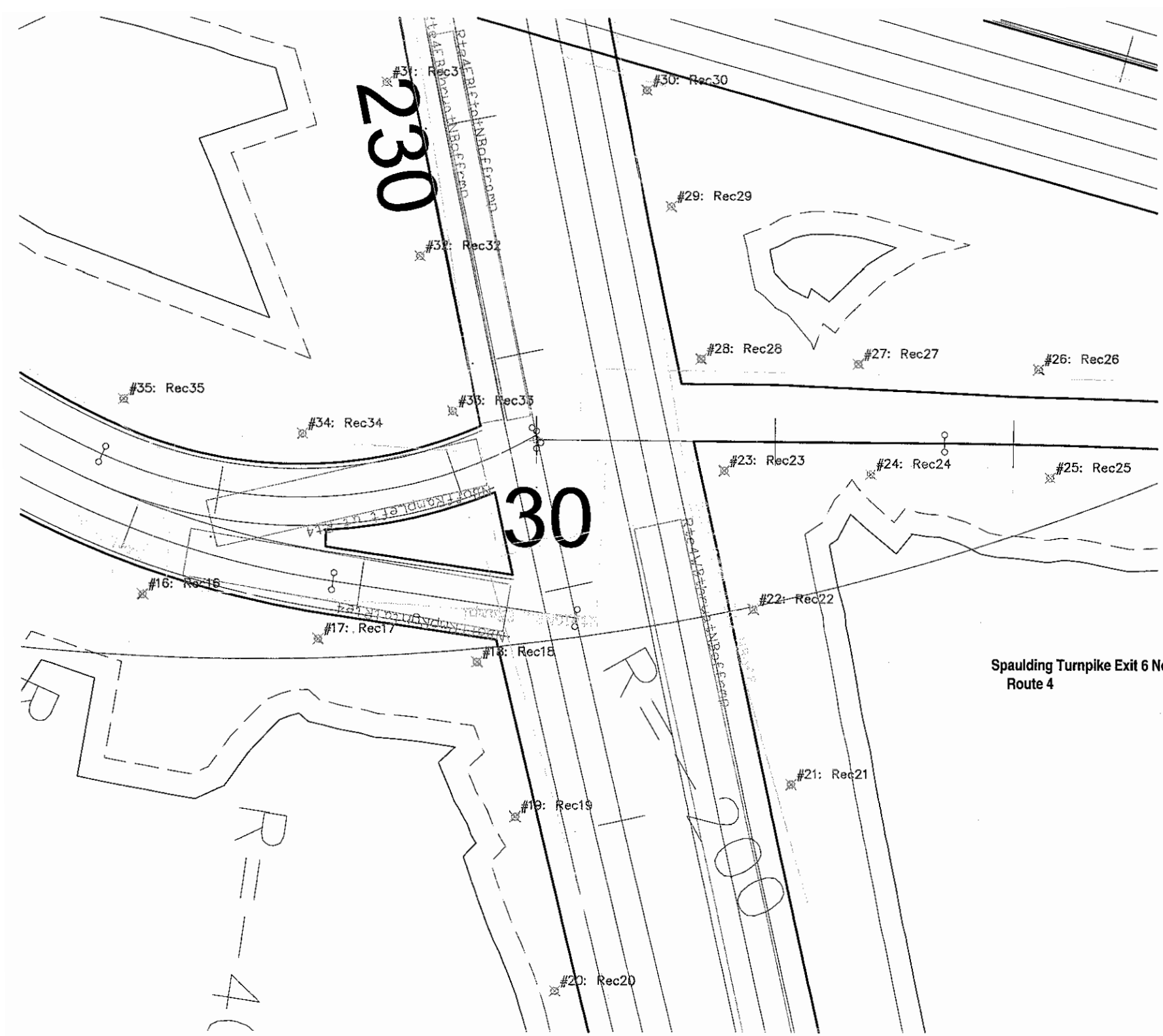


River Road Connector at Woodbury Avenue Extension

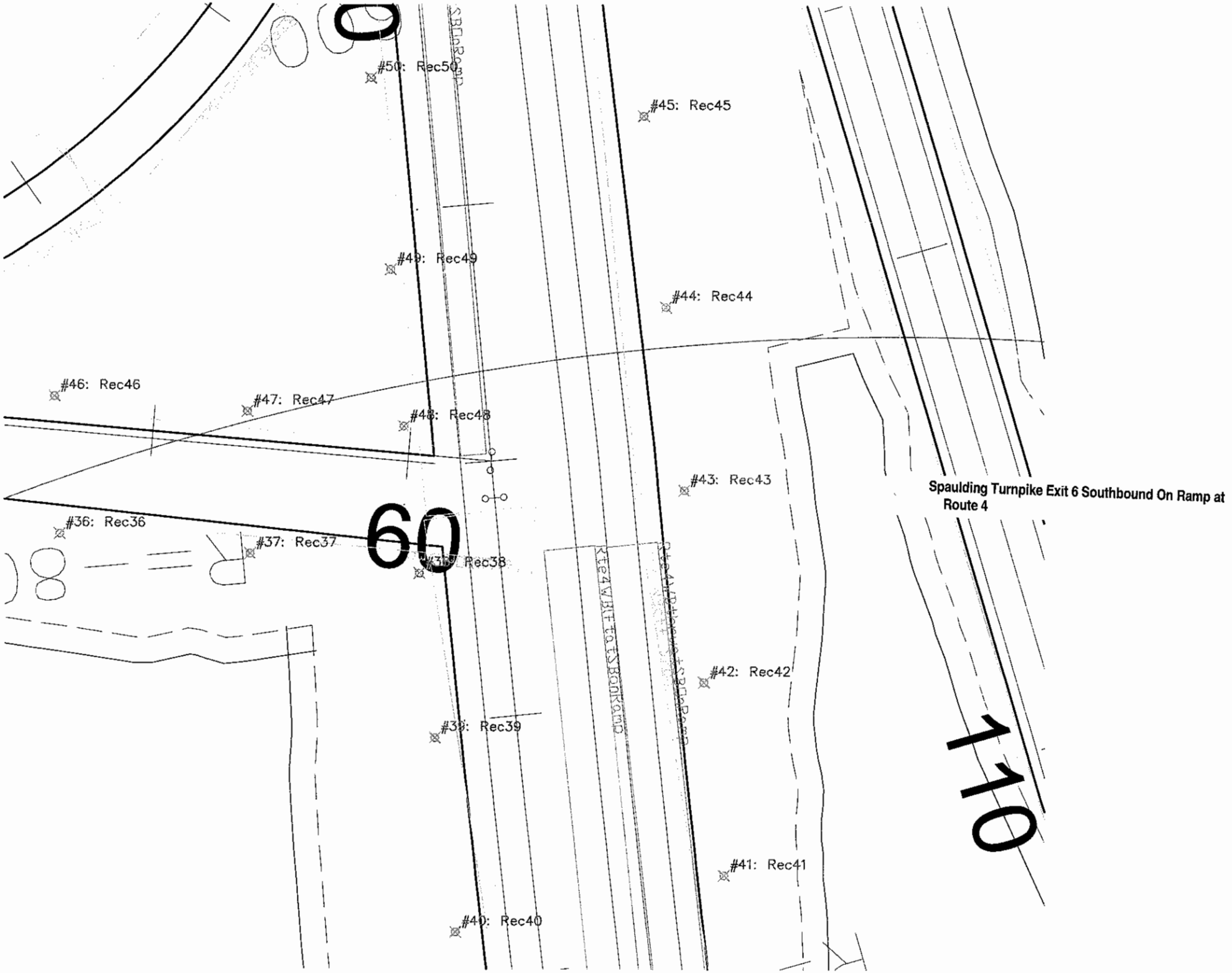

#60: Rec60
#61: Rec61
#59: Rec59
#62: Rec62
#56: Rec56
#57: Rec57
#58: Rec58
4045
500
#63: Rec63
#64: Rec64
#55: Rec55
#54: Rec54
#53: Rec53
#65: Rec65
#68: Rec68
#52: Rec52
#67: Rec67
#51: Rec51
#69: Rec69
#66: Rec66
210
#70: Rec70
Spaulding Turnpike Exit 3 Southbound Ramps at Woodbury Avenue Extension

Dover


Dover Point Road at Route 4
#1: Rec1
#2: Rec2
#3: Rec3
#4: Rec4
#5: Rec5
#6: Rec6
#7: Rec7
#8: Rec8
#9: Rec9
#10: Rec10
#11: Rec11
#12: Rec12
#13: Rec13
#14: Rec14
#15: Rec15
240



Spaulding Turnpike Exit 6 Northbound Off Ramp at Route 4


#50: Rec50
#45: Rec45
#49: Rec49
#44: Rec44
#46: Rec46
#47: Rec47
#48: Rec48
#43: Rec43
Spaulding Turnpike Exit 6 Southbound On Ramp at Route 4
#36: Rec36
#37: Rec37
#38: Rec38
60
#42: Rec42
#39: Rec39
110
#41: Rec41
#40: Rec40

CAL3QHC Input Files

Input files for all the 2013 Build Alternatives are presented here as an example. The remaining files are available upon request.

Newington

2013 Build (Alternatives 10A, 12A)

```
'NewingtonAlt12A'   60   175   0   0   50   0.3048   1   0
'Rec1'   1212517   220989.1   6
'Rec2'   1212530   221063   6
'Rec3'   1212544   221125.5   6
'Rec4'   1212605   221108.5   6
'Rec5'   1212675   221082.9   6
'Rec6'   1212731   221174.8   6
'Rec7'   1212670   221217.7   6
'Rec8'   1212621   221261.7   6
'Rec9'   1212568   221323.2   6
'Rec10'   1212521   221381.7   6
'Rec11'   1212462   221349.2   6
'Rec12'   1212510   221289   6
'Rec13'   1212523   221229.9   6
'Rec14'   1212461   221240.1   6
'Rec15'   1212386   221248.8   6
'Rec16'   1212366   221150.2   6
'Rec17'   1212440   221142   6
'Rec18'   1212502   221132.9   6
'Rec19'   1212488   221071.8   6
'Rec20'   1212474   220997.4   6
'Rec21'   1211744   221134.9   6
'Rec22'   1211675   221105   6
'Rec23'   1211618   221079.6   6
'Rec24'   1211594   221138   6
'Rec25'   1211565   221207.4   6
'Rec26'   1211471   221167.8   6
'Rec27'   1211499   221098.2   6
'Rec28'   1211524   221039.6   6
'Rec29'   1211465   221014.9   6
'Rec30'   1211396   220987.3   6
'Rec31'   1211478   220911.7   6
'Rec32'   1211548   220939.2   6
'Rec33'   1211616   220968.4   6
'Rec34'   1211684   220997.7   6
'Rec35'   1211754   221026.8   6
'Rec36'   1211313   220692.8   6
'Rec37'   1211283   220762.1   6
'Rec38'   1211255   220818.1   6
'Rec39'   1211312   220842.2   6
'Rec40'   1211382   220871.3   6
'Rec41'   1211342   220966   6
'Rec42'   1211271   220937.5   6
'Rec43'   1211215   220910.9   6
'Rec44'   1211190   220967.9   6
'Rec45'   1211161   221037.4   6
'Rec46'   1211111   220982.2   6
'Rec47'   1211141   220912.6   6
'Rec48'   1211170   220845   6
'Rec49'   1211201   220777.7   6
'Rec50'   1211231   220708.8   0
'Rec51'   1211629   220463.8   6
'Rec52'   1211608   220428.1   6
```

```
'Rec53'   1211584   220379.8   6
'Rec54'   1211541   220416.2   6
'Rec55'   1211491   220471   6
'Rec56'   1211436   220374.2   6
'Rec57'   1211492   220324.7   6
'Rec58'   1211541   220285.7   6
'Rec59'   1211504   220238.8   6
'Rec60'   1211444   220194.7   6
'Rec61'   1211505   220148   6
'Rec62'   1211562   220199   6
'Rec63'   1211601   220249.4   6
'Rec64'   1211661   220225   6
'Rec65'   1211732   220198.5   6
'Rec66'   1211792   220280.2   6
'Rec67'   1211722   220308.8   6
'Rec68'   1211665   220327.6   6
'Rec69'   1211695   220384   6
'Rec70'   1211731   220449.8   6
'2013 Newington Alt 12A'   70   1   0   'C'
 2
'WdbryWBthruatNBRamps'   'AG'   1212548.68   221196.21   1212776.28   221123.94   1   20   2
60   48   3   164   100.45   1600   1   3
 2
'WdbryEBthruatNBRamps'   'AG'   1212516.84   221157.73   1212325.68   221183.05   1   20   2
60   15   3   432   100.45   1600   1   3
 2
'WdbryEBlftatNBRamps'   'AG'   1212519.48   221180.42   1212336.77   221204.68   1   10   1
60   27   3   577   100.45   1600   1   3
 2
'NBOffRampatWdbryAve'   'AG'   1212524.23   221139.09   1212497.3   221010.88   1   20   2
60   45   3   129   100.45   1600   1   3
 2
'WdbryWBatSBRamps'   'AG'   1211620.33   221050.6   1211837.93   221141.63   1   20   2
60   44   3   183   100.45   1600   1   3
 2
'WdbryEBlftatSBRamps'   'AG'   1211551.18   220997.48   1211359.15   220917.56   1   10   1
60   44   3   58   100.45   1600   1   3
 2
'WdbryEBthruatSBRamps'   'AG'   1211559.76   220977.17   1211366.24   220895.68   1   20   2
60   28   3   487   100.45   1600   1   3
 2
'SBOffRampLeft'   'AG'   1211561.99   221044.52   1211484.94   221231.41   1   20   2
60   32   3   522   100.45   1600   1   3
 2
'SBOffRampRight'   'AG'   1211544.45   221037.3   1211470.19   221216.07   1   10   1
60   16   3   195   100.45   1600   1   3
 2
'WdbryWBatRvrRd'   'AG'   1211216.2   220880.22   1211510.53   221003.49   1   20   2
60   39   3   347   100.45   1600   1   3
 2
'RvrRdSBatWdbry'   'AG'   1211178.38   220884.24   1211103.8   221055.18   1   10   1
60   21   3   210   100.45   1600   1   3
 2
'RvrRdNBatWdbry'   'AG'   1211231.04   220819.11   1211314.68   220631.02   1   10   1
```

```
60   21   3   452   100.45   1600   1   3
 1
'WoodburyAveExt1'   'AG'   1213414   220701.1   1212973   220991.9   1703   15.537   1   78
 1
'WoodburyAveExt2'   'AG'   1212972   220992.1   1212821   221081.6   1703   15.537   1   86
 1
'WoodburyAveExt3'   'AG'   1212536   221179.9   1212819   221082.5   849   15.537   1   86
 1
'WoodburyAveExt4'   'AG'   1212534   221179.1   1212321   221206.7   1192   15.537   1   94
 1
'WoodburyAveExt5'   'AG'   1212320   221203.8   1212093   221190.4   1192   15.537   1   94
 1
'WoodburyAveExt6'   'AG'   1212092   221187.8   1211854   221123.6   1192   15.537   1   94
 1
'WoodburyAveExt7'   'AG'   1211852   221125.2   1211597   221016.8   1192   15.537   1   94
 1
'WoodburyAveExt8'   'AG'   1211595   221015.2   1211205   220852.8   892   15.537   1   94
 1
'Rte16NB1'   'AG'   1212711   220195.5   1212281   221155.4   3000   15.232   1   75
 1
'Rte16NB2'   'AG'   1212281   221156.7   1211974   222008.3   3000   15.232   1   75
 1
'Rte16SB1'   'AG'   1211917   221988.7   1212213   221142.3   1278   15.232   1   75
 1
'Rte16SB2'   'AG'   1212212   221142.2   1212659   220169.5   1368   15.232   1   75
 1
'NBOffRamp1'   'AG'   1212766   220206.5   1212514   220829.5   129   16.923   1   37
 1
'NBoffRamp2'   'AG'   1212515   220830.6   1212494   220914   129   16.923   1   37
 1
'NBOffRamp3'   'AG'   1212496   220914.8   1212496   221014.8   129   16.923   1   37
 1
'NBOffRamp4'   'AG'   1212498   221015.8   1212534   221179   129   16.923   1   37
 1
'NBOnRamp1'   'AG'   1212535   221177.9   1212547   221259.8   432   16.923   1   35
 1
'NBOnRamp2'   'AG'   1212545   221260.5   1212528   221301.9   432   16.923   1   35
 1
'NBOnRamp3'   'AG'   1212527   221300.8   1212254   221638.5   432   16.923   1   35
 1
'NBOnRamp4'   'AG'   1212679   221178.3   1212581   221270.7   853   16.923   1   35
 1
'NBOnRamp5'   'AG'   1212582   221272.3   1212202   221738.1   853   16.923   1   38
 1
'NBOnRamp6'   'AG'   1212203   221739.5   1212028   222041.6   1286   16.923   1   38
 1
'SBOnRamp1'   'AG'   1211618   221026.2   1211521   221258.9   90   16.923   1   36
 1
'SBOnRamp2'   'AG'   1211521   221260.1   1211514   221357.8   90   16.923   1   36
 1
'SBOnRamp3'   'AG'   1211517   221357.8   1211543   221456.4   90   16.923   1   36
 1
'SBOnRamp4'   'AG'   1211546   221455.9   1211610   221542.3   90   16.923   1   36
 1
```

```
'SBOnRamp5'   'AG'   1211612   221541.7   1211707   221599.3   90   16.923   1   36
 1
'SBOnRamp6'   'AG'   1211708   221597.3   1211809   221614.3   90   16.923   1   36
 1
'SBOnRamp7'   'AG'   1211810   221612.4   1211920   221588.1   90   16.923   1   36
 1
'SBOnRamp8'   'AG'   1211920   221586.8   1212008   221523.3   90   16.923   1   36
 1
'SBOnRamp9'   'AG'   1212009   221522   1212091   221387.5   90   16.923   1   36
 1
'SBOffRamp1'   'AG'   1211570   221007.3   1211465   221268.4   717   16.923   1   54
 1
'SBOffRamp2'   'AG'   1211465   221269.8   1211442   221407.5   717   16.923   1   54
 1
'SBOffRamp3'   'AG'   1211444   221407.8   1211461   221516.2   717   16.923   1   60
 1
'SBOffRamp4'   'AG'   1211465   221515.6   1211564   221723   717   16.923   1   54
 1
'SBOffRamp5'   'AG'   1211566   221722.5   1211679   222008.9   717   16.923   1   42
 1
'RiverRdCon1'   'AG'   1212079   220139   1211673   220262.3   740   15.537   1   61
 1
'RiverRdCon2'   'AG'   1211673   220264.1   1211537   220342.3   740   15.537   1   61
 1
'RiverRdCon3'   'AG'   1211536   220343.2   1211421   220447.7   744   15.537   1   61
 1
'RiverRdCon4'   'AG'   1211422   220447.9   1211328   220576.5   744   15.537   1   61
 1
'RiverRdCon5'   'AG'   1211329   220575.3   1211201   220858.8   744   15.537   1   61
 1
'RiverRdCon6'   'AG'   1211201   220859.2   1211112   221069   382   15.537   1   61
 1
'RiverRdCon7'   'AG'   1211111   221070   1211086   221183.4   382   15.537   1   61
 1
'RiverRdCon8'   'AG'   1211086   221185.6   1211084   221329.5   382   15.537   1   61
 1
'RiverRdCon9'   'AG'   1211087   221329.7   1211113   221460   382   15.537   1   61
 1
'RiverRdCon10'   'AG'   1211117   221459.1   1211389   221989.7   292   15.537   1   61
 1
'ConRd1'   'AG'   1211213   221652.8   1211299   221619   91   15.537   1   60
 1
'ConRd2'   'AG'   1211299   221619.7   1211370   221627.8   91   15.537   1   60
 1
'ConRd3'   'AG'   1211370   221628.5   1211888   221831.4   91   15.537   1   60
 1
'ConRd4'   'AG'   1211889   221831   1212151   221975.7   91   15.537   1   60
 1
'ConRd5'   'AG'   1212152   221976.1   1212367   222130.3   91   15.537   1   60
 1
'ConRd6'   'AG'   1212368   222130.2   1212558   222298   91   15.537   1   60
 1
'ArbDrve1'   'AG'   1211581   220313.5   1211505   220205.1   16   15.537   1   48
 1
```

```
'ArbDrve2'   'AG'   1211504   220204.5   1211416   220150.2   16   15.537   1   48
 1
'ArbDrve3'   'AG'   1211415   220150.2   1211340   220135.2   16   15.537   1   48
 1
'ArbDrve4'   'AG'   1211340   220136.1   1211198   220145.4   16   15.537   1   48
 1
'ArbDrve5'   'AG'   1211198   220146.4   1211110   220179.5   16   15.537   1   48
 1
'ArbDrve6'   'AG'   1211110   220180.3   1210702   220413.8   16   15.537   1   48
1   0   4   1000   2   'Y'   10   0   36
```

2013 Build (Alternative 13)

```
'Newington'   60   175   0   0   50   0.3048   1   0
'Rec1'   1212517   220989.1   6
'Rec2'   1212530   221063   6
'Rec3'   1212544   221125.5   6
'Rec4'   1212605   221108.5   6
'Rec5'   1212675   221082.9   6
'Rec6'   1212731   221174.8   6
'Rec7'   1212670   221217.7   6
'Rec8'   1212621   221261.7   6
'Rec9'   1212568   221323.2   6
'Rec10'   1212521   221381.7   6
'Rec11'   1212462   221349.2   6
'Rec12'   1212510   221289   6
'Rec13'   1212523   221229.9   6
'Rec14'   1212461   221240.1   6
'Rec15'   1212386   221248.8   6
'Rec16'   1212366   221150.2   6
'Rec17'   1212440   221142   6
'Rec18'   1212502   221132.9   6
'Rec19'   1212488   221071.8   6
'Rec20'   1212474   220997.4   6
'Rec21'   1211744   221134.9   6
'Rec22'   1211675   221105   6
'Rec23'   1211618   221079.6   6
'Rec24'   1211594   221138   6
'Rec25'   1211565   221207.4   6
'Rec26'   1211471   221167.8   6
'Rec27'   1211499   221098.2   6
'Rec28'   1211524   221039.6   6
'Rec29'   1211465   221014.9   6
'Rec30'   1211396   220987.3   6
'Rec31'   1211478   220911.7   6
'Rec32'   1211548   220939.2   6
'Rec33'   1211616   220968.4   6
'Rec34'   1211684   220997.7   6
'Rec35'   1211754   221026.8   6
'Rec36'   1211313   220692.8   6
'Rec37'   1211283   220762.1   6
'Rec38'   1211255   220818.1   6
'Rec39'   1211312   220842.2   6
'Rec40'   1211382   220871.3   6
'Rec41'   1211342   220966   6
'Rec42'   1211271   220937.5   6
'Rec43'   1211215   220910.9   6
'Rec44'   1211190   220967.9   6
'Rec45'   1211161   221037.4   6
'Rec46'   1211111   220982.2   6
'Rec47'   1211141   220912.6   6
'Rec48'   1211170   220845   6
'Rec49'   1211201   220777.7   6
'Rec50'   1211231   220708.8   0
'Rec51'   1211629   220463.8   6
'Rec52'   1211608   220428.1   6
```

```
'Rec53'   1211584   220379.8   6
'Rec54'   1211541   220416.2   6
'Rec55'   1211491   220471   6
'Rec56'   1211436   220374.2   6
'Rec57'   1211492   220324.7   6
'Rec58'   1211541   220285.7   6
'Rec59'   1211504   220238.8   6
'Rec60'   1211444   220194.7   6
'Rec61'   1211505   220148   6
'Rec62'   1211562   220199   6
'Rec63'   1211601   220249.4   6
'Rec64'   1211661   220225   6
'Rec65'   1211732   220198.5   6
'Rec66'   1211792   220280.2   6
'Rec67'   1211722   220308.8   6
'Rec68'   1211665   220327.6   6
'Rec69'   1211695   220384   6
'Rec70'   1211731   220449.8   6
'2013 Newington Alt 13 Build'   68   2   0   'C'
 2
'NBOffRamplftrt'   'AG'   1212475.34   221264.81   1212439.48   221117.68   1   20   2
110   91   3   129   100.145   1600   1   3
 2
'WdbryAveEB'   'AG'   1212513.2   221313.41   1212868.6   221078.94   1   20   2
110   96   3   16   100.145   1600   1   3
 2
'WdbryWBthru'   'AG'   1212470.13   221288.54   1212299.98   221369.16   1   20   2
110   31   3   545   100.145   1600   1   3
 2
'WdbryWBLft'   'AG'   1212478.73   221308.13   1212317.12   221387.34   1   10   1
110   61   3   432   100.145   1600   1   3
 2
'ArborSB'   'AG'   1211588.45   220268.27   1211515.62   220181.3   1   10   1
110   104   3   19   100.145   1600   1   3
 2
'SBOffRampNB'   'AG'   1211600.09   220349.39   1211704.48   220547.21   1   30   3
110   52   3   834   100.145   1600   1   3
 2
'ArborEBLft'   'AG'   1211631.03   220291.56   1211795.5   220226.1   1   10   1
110   104   3   16   100.145   1600   1   3
 2
'ArborEBthrght'   'AG'   1211640.81   220311.47   1211802.88   220246.42   1   10   1
110   92   3   452   100.145   1600   1   3
 2
'WdbryWBLft'   'AG'   1211563.97   220315.43   1211456.02   220408.32   1   10   1
110   104   3   16   100.145   1600   1   3
 2
'Wdbrythrght'   'AG'   1211554.38   220304.37   1211441.47   220403.84   1   10   1
110   92   3   19   100.145   1600   1   3
 1
'Rte16NB1'   'AG'   1212711   220195.5   1212281   221155.4   3000   18.652   1   75
 1
'Rte16NB2'   'AG'   1212281   221156.7   1211974   222008.3   3000   18.652   1   75
 1
```

```
'Rte16SB1'   'AG'   1211917   221988.7   1212213   221142.3   1333   18.652   1   75
 1
'Rte16SB2'   'AG'   1212212   221142.2   1212659   220169.5   1333   18.652   1   75
 1
'WdbryAve1'   'AG'   1213414   220700.8   1212963   220998.2   1586   15.537   1   73
 1
'WdbryAve2'   'AG'   1212963   220999   1212489   221301.4   670   15.537   1   83
 1
'WdbryAveExt1'   'AG'   1212490   221303   1212313   221387.7   1013   15.537   1   88
 1
'WdbryAveExt2'   'AG'   1212311   221384.1   1212122   221425.1   1013   15.537   1   88
 1
'WdbryAveExt3'   'AG'   1212121   221423.8   1211958   221426.8   1013   15.537   1   88
 1
'WdbryAveExt4'   'AG'   1211958   221424.3   1211820   221404.6   1013   15.537   1   88
 1
'WdbryAveExt5'   'AG'   1211821   221402.8   1211652   221345   1013   15.537   1   88
 1
'WdbryAveExt6'   'AG'   1211652   221342.8   1211538   221272.5   1013   15.537   1   88
 1
'WdbryAveExt7'   'AG'   1211540   221271.5   1211438   221171.3   1013   15.537   1   88
 1
'WdbryAveExt8'   'AG'   1211441   221167.9   1211375   221062.1   1013   15.537   1   88
 1
'WdbryAveExt9'   'AG'   1211377   221060.7   1211325   220876.6   1013   15.537   1   88
 1
'WdbryAveExt10'   'AG'   1211325   220876.2   1211333   220689.5   1013   15.537   1   88
 1
'WdbryAveExt11'   'AG'   1211332   220688.9   1211392   220522.5   1013   15.537   1   88
 1
'WdbryAveExt12'   'AG'   1211393   220522.8   1211483   220399.3   1013   15.537   1   88
 1
'WdbryAveExt13'   'AG'   1211483   220398.5   1211598   220302.8   1013   15.537   1   88
 1
'Arbor1'   'AG'   1211597   220302.3   1211796   220226.1   775   15.537   1   83
 1
'Arbor2'   'AG'   1211796   220227.7   1212132   220129.7   775   15.537   1   83
 1
'Arbor3'   'AG'   1212132   220129.4   1212261   220064   775   15.537   1   60
 1
'Arbor4'   'AG'   1212261   220063   1212362   219966.3   775   15.537   1   60
 1
'Arbor5'   'AG'   1212363   219964.9   1212464   219775.5   775   15.537   1   60
 1
'arbor6'   'AG'   1211597   220301.5   1211521   220203.3   55   15.537   1   55
 1
'arbor7'   'AG'   1211520   220203.6   1211451   220156.6   55   15.537   1   55
 1
'arbor8'   'AG'   1211451   220158.9   1211389   220139.3   55   15.537   1   55
 1
'arbor9'   'AG'   1211388   220139.8   1211310   220138.6   55   15.537   1   55
 1
'arbor10'   'AG'   1211310   220138.1   1211242   220139.5   55   15.537   1   43
 1
```

```
'arbor11'   'AG'   1211242   220140.2   1211149   220161.6   55   15.537   1   43
 1
'arbor12'   'AG'   1211150   220161.9   1211070   220201.5   55   15.537   1   43
 1
'arbor13'   'AG'   1211071   220202.4   1210868   220319.3   55   15.537   1   43
 1
'SBOffRamptoWdbryExt1'   'AG'   1211668   220509.7   1211598   220475.3   542   16.923   1   38
 1
'SBOffRamptoWdbryExt2'   'AG'   1211597   220476.5   1211525   220478   542   16.923   1   38
 1
'SBOffRamptoWdbryExt3'   'AG'   1211526   220479   1211427   220542   542   16.923   1   38
 1
'SBOnRamp1'   'AG'   1211616   220291.1   1211895   220815.2   35   16.923   1   38
 1
'SBOnRamp2'   'AG'   1211896   220813.5   1211971   220883.8   35   16.923   1   38
 1
'SBOnRamp3'   'AG'   1211974   220881   1212046   220909.6   35   16.923   1   38
 1
'SBOnRamp4'   'AG'   1212048   220907.9   1212137   220912.5   35   16.923   1   38
 1
'SBOnRamp5'   'AG'   1212137   220912.5   1212231   220882.3   35   16.923   1   38
 1
'SBOnRamp6'   'AG'   1212230   220880.9   1212303   220820.8   35   16.923   1   38
 1
'SBOnRamp7'   'AG'   1212303   220820.8   1212455   220513.3   35   16.923   1   38
 1
'SBOffRamp1'   'AG'   1211871   221969.6   1211988   221571.9   834   16.923   1   40
 1
'SBOffRamp2'   'AG'   1211989   221571.3   1212008   221407.9   834   16.923   1   40
 1
'SBOffRamp3'   'AG'   1212008   221405.5   1211995   221201.9   834   16.923   1   40
 1
'SBOffRamp4'   'AG'   1211994   221201.8   1211939   221007.5   834   16.923   1   40
 1
'SBOffRamp5'   'AG'   1211937   221007.4   1211846   220820.6   834   16.923   1   40
 1
'SBOffRamp6'   'AG'   1211845   220821   1211582   220313.2   834   16.923   1   45
 1
'NBOffRamp1'   'AG'   1212767   220207.8   1212458   220961.2   129   16.923   1   38
 1
'NBOffRamp2'   'AG'   1212460   220962.5   1212440   221076.6   129   16.923   1   38
 1
'NBOffRamp3'   'AG'   1212441   221077.5   1212449   221170.1   129   16.923   1   38
 1
'NBOffRamp4'   'AG'   1212450   221169.8   1212485   221297.7   129   16.923   1   38
 1
'NBOnRamp1'   'AG'   1212486   221296   1212514   221360   1348   16.923   1   38
 1
'NBOnRamp2'   'AG'   1212513   221360.5   1212498   221414.1   1348   16.923   1   38
 1
'NBOnRamp3'   'AG'   1212495   221413.3   1212375   221584.7   1348   16.923   1   38
 1
'NBOnRamp4'   'AG'   1212381   221589.5   1212046   222059.2   1348   16.923   1   36
 1
```

```
'WdbrytoNBOnRamp1'   'AG'   1212834   221131.6   1212631   221305.3   432   16.923   1   34
 1
'WdbrytoNBOnRamp2'   'AG'   1212633   221306.5   1212421   221542.4   432   16.923   1   34
1   0   4   1000   2   'Y'   10   0   36
```

Dover

2013 Build (Alternatives 2, 3)

```
'Newington Dover Route 16'   60   175   0   0   50   0.3048   1   1
'Rec1'   1206030   231561.4   6
'Rec2'   1206002   231634.3   6
'Rec3'   1205961   231687.8   6
'Rec4'   1205993   231746.0   6
'Rec5'   1206025   231815.9   6
'Rec6'   1205934   231869.6   6
'Rec7'   1205900   231802.8   6
'Rec8'   1205865   231738.2   0
'Rec9'   1205820   231680.1   6
'Rec10'   1205772   231622.5   6
'Rec11'   1205855   231533.2   6
'Rec12'   1205899   231593.3   6
'Rec13'   1205932   231639.9   6
'Rec14'   1205961   231591.5   6
'Rec15'   1205978   231517.5   6
'Rec16'   1205565   231017.6   6
'Rec17'   1205539   231089.0   6
'Rec18'   1205510   231149.7   6
'Rec19'   1205555   231198.7   6
'Rec20'   1205607   231253.0   6
'Rec21'   1205480   231287.3   6
'Rec22'   1205427   231233.4   6
'Rec23'   1205385   231190.8   6
'Rec24'   1205352   231242.6   6
'Rec25'   1205311   231305.9   6
'Rec26'   1205276   231276.5   6
'Rec27'   1205317   231212.7   6
'Rec28'   1205352   231156.8   6
'Rec29'   1205306   231111.0   6
'Rec30'   1205271   231075.4   6
'Rec31'   1205329   230983.4   6
'Rec32'   1205382   231035.4   6
'Rec33'   1205428   231082.7   6
'Rec34'   1205471   231035.6   6
'Rec35'   1205501   230965.5   6
'Rec36'   1204843   230365.8   6
'Rec37'   1204808   230431.8   6
'Rec38'   1204777   230490.8   6
'Rec39'   1204827   230531.6   6
'Rec40'   1204886   230580.3   6
'Rec41'   1204809   230654.9   6
'Rec42'   1204751   230606.7   6
'Rec43'   1204693   230558.6   6
'Rec44'   1204637   230512.7   6
'Rec45'   1204580   230464.3   6
'Rec46'   1204800   230334.3   6
'Rec47'   1204762   230400.0   6
'Rec48'   1204733   230453.9   6
'Rec49'   1204685   230415.7   6
'Rec50'   1204627   230367.8   6
'Alternative2 2013 Dover'   46   1   0   'C'
 2
```

'DP WB thru at Rte4' 'AG' 1205878.85 231721.01 1205978.66 231898.14 1 20 2
90 23 3 542 100.145 1600 1 3
 2
'DP WB left at Rte4' 'AG' 1205893.96 231712.04 1205994.38 231888.94 1 10 1
90 79 3 4 100.145 1600 1 3
 2
'DP NB lft rght Rte4' 'AG' 1205944.75 231678.19 1206005.97 231588.69 1 10 1
90 79 3 12 100.145 1600 1 3
 2
'Rte 4 EB at DP Rd' 'AG' 1205917.3 231676.59 1205835 231559.78 1 20 2
90 40 3 1068 100.145 1600 1 3
 2
'Rte4WBthruatNBoffrmp' 'AG' 1205419.77 231180.28 1205628.06 231394.92 1 20 2
90 69 3 530 100.145 1600 1 3
 2
'Rte4EBthruatNBoffrmp' 'AG' 1205422.32 231098.93 1205299.45 230976.39 1 10 1
90 58 3 234 100.145 1600 1 3
 2
'Rte4EBlftatNBofframp' 'AG' 1205415.11 231107.24 1205298.98 230990.92 1 10 1
90 79 3 19 100.145 1600 1 3
 2
'NBoffRampLeft at Rt4' 'AG' 1205439.13 231104.72 1205524.1 231025.12 1 20 2
90 44 3 1169 100.145 1600 1 3
 2
'NBoffRmpRghtatRte4' 'AG' 1205484.41 231147.47 1205539.79 231023.21 1 20 2
90 44 3 834 100.145 1600 1 3
 2
'Rte4WBlftatSBonRamp' 'AG' 1204736.27 230533.92 1204920.39 230686.62 1 20 2
45 29 3 394 100.145 1600 1 3
 2
'Rte4WBthruatSBOnRamp' 'AG' 1204721.54 230553.4 1204903.66 230706.64 1 20 2
45 6 3 1305 100.145 1600 1 3
 2
'Rte4SBthruatSBOnRamp' 'AG' 1204726.94 230482.61 1204553.24 230343.41 1 10 1
45 28 3 253 100.145 1600 1 3
 1
'Route 16 Southbound1' 'AG' 1204542 233020.5 1205610 229725.6 1255 18.652 1 66
 1
'Route 16 Northbound1' 'AG' 1205659 229744 1204600 233044.7 2556 18.652 1 66
 1
'DoverpointRd1' 'AG' 1205906 231704.2 1206034 231973.1 1609 15.537 1 83
 1
'Doverpoint Rd2' 'AG' 1205905 231700.9 1205973 231638.9 23 15.537 1 48
 1
'Rte4 btwn DPRd NBoff' 'AG' 1205906 231703.4 1205438 231158.9 1617 15.537 1 91
 1
'Rte4 btwn NBoff SBon' 'AG' 1205437 231159.9 1204731 230511.4 1952 15.537 1 83
 1
'Rte4 btwn SBon BHRd' 'AG' 1204731 230512.8 1204436 230272 1559 15.537 1 83
 1
'Rte16NBoffRamp1' 'AG' 1205438 231164 1205529 231007.8 2003 16.923 1 66
 1
'Rte16NBoffRamp2' 'AG' 1205530 231007 1205549 230611 2003 16.923 1 42
 1

```
'Rte16SBOnRamp'   'AG'   1204731   230514.5   1205214   229634.3   394   16.923   1   42
 1
'Rte16NBOnRamp'   'AG'   1205399   231127.7   1205112   231573.6   39   16.923   1   38
 1
'Doverpoint Rd1b'   'AG'   1206037   231975.4   1206060   232185.5   1609   15.537   1   42
 1
'Doverpoint Rd 1c'   'AG'   1206060   232187.2   1205984   232476.8   1609   15.537   1   42
 1
'Doverpoint Rd2b'   'AG'   1205972   231635.8   1206011   231541.7   23   15.537   1   48
 1
'Doverpoint Rd2c'   'AG'   1206007   231539.9   1205984   230288.2   23   15.537   1   48
 1
'Doverpoint Rd1d'   'AG'   1205983   232477.6   1205855   232709.6   1609   15.537   1   42
 1
'Rte16NBoffRamp3'   'AG'   1205549   230610   1205584   230281.6   2003   16.923   1   42
 1
'Rte16NBoffRamp4'   'AG'   1205585   230280.4   1205702   229786   2003   16.923   1   42
 1
'Rte4btwn SBon BHRd2'   'AG'   1204434   230274.2   1204192   230149.4   2190   15.537   1   83
 1
'Rte4 btwn SBon BHRd3'   'AG'   1204192   230149   1203945   230105.8   2190   15.537   1   83
 1
'Rte16SBOnRamp2'   'AG'   1204533   230295.9   1204622   230310.4   631   16.923   1   38
 1
'Rte16SBOnRamp3'   'AG'   1204623   230308.2   1204721   230296.6   631   16.923   1   38
 1
'Rte16SBOnRamp4'   'AG'   1204721   230292.8   1204841   230231.3   631   16.923   1   38
 1
'Rte16SBOnRamp5'   'AG'   1204841   230225.5   1205108   229777.8   631   16.923   1   38
 1
'Spur Rd 1'   'AG'   1203946   230105.8   1203959   230190   140   15.537   1   42
 1
'Spur Rd 2'   'AG'   1203961   230191.2   1204016   230235.5   140   15.537   1   42
 1
'Spur Rd 3'   'AG'   1204021   230231.6   1204328   230349.7   140   15.537   1   42
 1
'Spur Rd 4'   'AG'   1204328   230353.2   1204453   230451   140   15.537   1   42
 1
'Spur Rd 5'   'AG'   1204452   230453.7   1204801   230877   140   15.537   1   42
 1
'Spur Rd 6'   'AG'   1204803   230878.7   1204714   231856.4   140   15.537   1   42
 1
'BostonHarborRd1'   'AG'   1203943   230105.8   1203985   229995   164   15.537   1   42
 1
'BostonHarborRd2'   'AG'   1203987   229994   1204697   229814.2   164   15.537   1   42
 1
'BostonHarborRd3'   'AG'   1204696   229807   1205001   229528.8   164   15.537   1   42
 1
'Rte4 btwn SBOn BHRd4'   'AG'   1203945   230105.8   1203715   230103.9   2081   15.537   1   83
1   0   4   1000   2   'Y'   10   0   36
```

Microscale Results Summary

Newington

1 Hour CO Results

Highest values for specific receptors are in bold

Newington

Receptor Location	Intersection/Receptors	2003 Existing	2013 No Build	2013 Alt 10A Build	2013 Alt 12A Build	2013 Alt 13 Build	2025 No Build	2025 Alt 10A Build	2025 Alt 12A Build	2025 Alt 13 Build
	Spaulding Turnpike Exit 3 Northbound Off Ramp at Woodbury Avenue Extension									
	Recp 1	**5.5**	**4.7**	3.3	3.3	3.1	**4.8**	3.4	3.4	**3.2**
Southeast Quadrant	Recp 2	4.5	3.8	3.1	3.1	3.0	3.9	3.4	3.4	3.0
	Recp 3	4.0	3.5	**4.1**	**4.1**	**3.1**	3.6	**4.3**	**4.3**	3.1
	Recp 4	3.6	3.2	3.3	3.3	3.0	3.2	3.5	3.5	3.0
	Recp 5	3.3	3.1	3.3	3.3	3.0	3.1	3.4	3.4	3.0
	Recp 6	4.2	3.8	3.3	3.3	3.4	3.8	3.6	3.6	3.4
Northeast Quadrant	Recp 7	4.6	4.0	**3.8**	**3.8**	3.4	4.1	**4.1**	**4.1**	3.5
	Recp 8	4.6	4.0	3.4	3.4	3.6	4.0	3.7	3.7	3.7
	Recp 9	**4.2**	3.6	3.5	3.5	**3.7**	**3.7**	3.7	3.7	**3.8**
	Recp 10	4.0	**3.7**	3.5	3.5	4.4	3.7	3.7	3.7	4.6
	Recp 11	**4.8**	4.2	3.1	3.1	3.8	4.2	3.1	3.1	3.8
Northwest Quadrant	Recp 12	4.3	3.8	3.0	3.0	4.4	3.8	3.3	3.3	4.4
	Recp 13	4.0	3.5	3.5	3.5	3.8	3.6	3.7	3.7	3.8
	Recp 14	4.7	**4.2**	3.5	3.5	4.7	**4.2**	3.8	3.8	4.4
	Recp 15	9.4	7.6	**3.7**	**3.7**	**3.6**	7.9	**4.0**	**4.0**	**3.6**
	Recp 16	6.6	5.4	**3.9**	**3.9**	**3.9**	5.5	**4.4**	**4.4**	**4.1**
Southwest Quadrant	Recp 17	**7.8**	**6.5**	3.5	3.5	3.3	**6.8**	3.9	3.9	3.4
	Recp 18	4.6	4.0	3.5	3.5	3.0	4.0	3.6	3.6	3.1
	Recp 19	5.5	4.7	3.2	3.2	3.1	4.8	3.4	3.4	3.2
	Recp 20	9.1	7.4	3.2	3.2	3.5	7.7	3.5	3.5	3.5
	Spaulding Turnpike Exit 3 Southbound Ramps at Woodbury Avenue Extension									
	Recp 21	**2.7**	2.5	**3.2**	**3.2**	2.7	**2.6**	**3.3**	**3.3**	2.7
Northeast Quadrant	Recp 22	2.7	2.5	3.2	3.2	2.6	2.5	3.3	3.3	2.7
	Recp 23	2.6	**2.6**	3.2	3.2	2.5	2.6	3.3	3.3	2.6
	Recp 24	2.7	2.5	2.8	2.8	2.6	2.5	2.9	2.9	2.6
	Recp 25	2.6	2.5	2.6	2.6	**2.8**	2.5	2.7	2.7	**2.9**
	Recp 26	2.6	2.4	3.0	3.0	3.1	2.4	3.1	3.1	3.2
Northwest Quadrant	Recp 27	2.6	2.5	3.5	3.5	**2.6**	2.6	3.5	3.5	**2.6**
	Recp 28	**2.6**	**2.5**	**3.7**	**3.7**	2.5	**2.6**	**4.1**	**4.1**	2.5
	Recp 29	2.6	2.5	3.3	3.3	2.5	2.5	3.4	3.4	2.5
	Recp 30	2.6	2.3	3.0	3.0	2.8	2.4	3.1	3.1	2.8
	Recp 31	2.6	2.5	3.2	3.2	2.4	2.5	3.3	3.3	2.4
South Quadrant	Recp 32	2.6	2.4	**3.3**	**3.3**	2.5	2.4	**3.3**	**3.3**	2.5
	Recp 33	2.6	2.4	3.0	3.0	2.5	2.4	3.0	3.0	2.5
	Recp 34	**2.7**	**2.6**	3.0	3.0	2.5	2.6	3.1	3.1	2.6
	Recp 35	2.7	2.6	3.0	3.0	**2.6**	**2.6**	3.1	3.1	**2.7**

	River Road Connector at Woodbury Avenue Extension									
	Recp 36	2.5	2.4	2.7	2.7	3.2	2.4	2.7	2.7	3.3
Southeast Quadrant	Recp 37	2.4	2.4	2.8	2.8	2.8	2.4	2.8	2.8	2.9
	Recp 38	2.4	2.3	2.9	2.9	**2.7**	2.3	3.0	3.0	**2.7**
	Recp 39	2.6	2.3	2.9	2.9	3.2	2.3	3.0	3.0	3.2
	Recp 40	**2.6**	**2.5**	**3.0**	**3.0**	2.5	**2.5**	**3.1**	**3.1**	2.5
	Recp 41	2.6	2.3	2.9	2.9	3.1	2.3	3.1	3.1	3.1
Northeast Quadrant	Recp 42	2.6	2.3	2.8	2.8	**2.7**	**2.4**	2.9	2.9	**2.9**
	Recp 43	**2.6**	**2.4**	**3.5**	**3.5**	2.6	2.4	**3.3**	**3.3**	2.7
	Recp 44	2.4	2.3	2.7	2.7	2.5	2.4	2.7	2.7	2.6
	Recp 45	2.4	2.3	2.5	2.5	2.5	2.3	2.5	2.5	2.5
	Recp 46	2.4	2.3	2.7	2.7	2.5	2.3	2.7	2.7	2.5
West Quadrant	Recp 47	2.5	2.3	3	3	2.5	**2.4**	3.1	3.1	2.6
	Recp 48	**2.5**	**2.3**	**3.3**	**3.3**	2.6	2.3	**3.4**	**3.4**	2.6
	Recp 49	2.4	2.3	3.1	3.1	2.5	2.3	3.3	3.3	**2.7**
	Recp 50	2.5	2.3	2.8	2.8	**2.7**	2.3	2.9	2.9	2.7
	Spaulding Turnpike Exit 3 Southbound Ramps at Woodbury Avenue Extension									
	Recp 51	2.5	2.4	2.3	2.3	3.7	2.4	2.4	2.4	3.8
Northeast Quadrant	Recp 52	2.4	2.4	2.3	2.3	4	2.4	2.4	2.4	3.8
	Recp 53	**2.5**	**2.4**	**2.3**	**2.3**	**4.2**	**2.4**	**2.4**	**2.4**	**4.0**
	Recp 54	2.4	2.4	2.3	2.3	3.5	2.4	2.4	2.4	3.3
	Recp 55	2.5	2.4	2.3	2.3	3.0	2.4	2.4	2.4	3.0
	Recp 56	2.4	2.4	2.6	2.6	3.2	2.4	2.6	2.6	3.5
Northwest Quadrant	Recp 57	2.5	2.3	**2.7**	**2.7**	3.6	2.4	**2.7**	**2.7**	3.6
	Recp 58	**2.5**	**2.4**	2.6	2.6	**3.9**	**2.4**	2.7	2.7	**3.9**
	Recp 59	2.4	2.3	2.4	2.4	3.0	2.4	2.6	2.6	3.1
	Recp 60	2.4	2.3	2.4	2.4	2.9	2.3	2.5	2.5	2.9
	Recp 61	2.4	2.3	2.3	2.3	3.0	2.3	2.4	2.4	3.4
Southwest Quadrant	Recp 62	2.4	2.4	2.4	2.4	3.4	2.4	2.6	2.6	**3.4**
	Recp 63	2.4	**2.4**	2.6	2.6	**3.4**	2.4	2.7	2.7	3.3
	Recp 64	2.5	2.4	2.6	2.6	3.2	**2.4**	**2.8**	**2.8**	3.3
	Recp 65	**2.5**	2.4	**2.7**	**2.7**	3.1	2.4	2.7	2.7	3.2
	Recp 66	2.6	2.4	2.4	2.4	3.2	2.4	2.4	2.4	3.2
Southeast Quadrant	Recp 67	2.5	2.4	2.3	2.3	3.1	2.4	2.4	2.4	3.0
	Recp 68	2.5	2.4	**2.4**	**2.4**	**3.2**	2.4	2.4	2.4	3.2
	Recp 69	**2.6**	**2.5**	2.3	2.3	3.2	**2.5**	**2.4**	**2.4**	**3.2**
	Recp 70	2.6	2.5	2.3	2.3	2.7	2.5	2.4	2.4	2.9

8 Hour CO Results

Highest values for specific receptors are in bold

Newington

Receptor Location	Intersection/Receptors	2003 Existing	2013 No Build	2013 Alt 10A Build	2013 Alt 12A Build	2013 Alt 13 Build	2025 No Build	2025 Alt 10A Build	2025 Alt 12A Build	2025 Alt 13 Build
	Spaulding Turnpike Exit 3 Northbound Off Ramp at Woodbury Avenue Extension									
	Recp 1	**3.9**	**3.3**	2.3	2.3	2.2	**3.4**	2.4	2.4	**2.2**
Southeast Quadrant	Recp 2	3.2	2.7	2.2	2.2	2.1	2.7	2.4	2.4	2.1
	Recp 3	2.8	2.5	2.9	**2.9**	**2.2**	2.5	3.0	**3.0**	2.2
	Recp 4	2.5	2.2	2.3	2.3	2.1	2.2	2.5	2.5	2.1
	Recp 5	2.3	2.2	2.3	2.3	2.1	2.2	2.4	2.4	2.1
	Recp 6	2.9	2.7	2.3	2.3	2.4	2.7	2.5	2.5	2.4
Northeast Quadrant	Recp 7	3.2	2.8	2.7	**2.7**	2.4	2.9	2.9	**2.9**	2.5
	Recp 8	3.2	2.8	2.4	2.4	2.5	2.8	2.6	2.6	2.6
	Recp 9	**2.9**	2.5	2.5	2.5	**2.6**	**2.6**	2.6	2.6	**2.7**
	Recp 10	2.8	**2.6**	2.5	2.5	3.1	2.6	2.6	2.6	3.2
	Recp 11	**3.4**	2.9	2.2	2.2	2.7	2.9	2.2	2.2	2.7
Northwest Quadrant	Recp 12	3.0	2.7	2.1	2.1	3.1	2.7	2.3	2.3	3.1
	Recp 13	2.8	2.5	2.5	2.5	2.7	2.5	2.6	2.6	2.7
	Recp 14	3.3	**2.9**	2.5	2.5	3.3	**2.9**	2.7	2.7	3.1
	Recp 15	6.6	5.3	2.6	**2.6**	**2.5**	5.5	2.8	**2.8**	**2.5**
	Recp 16	4.6	3.8	2.7	**2.7**	**2.7**	3.9	3.1	**3.1**	**2.9**
Southwest Quadrant	Recp 17	**5.5**	**4.6**	2.5	2.5	2.3	**4.8**	2.7	2.7	2.4
	Recp 18	3.2	2.8	2.5	2.5	2.1	2.8	2.5	2.5	2.2
	Recp 19	3.9	3.3	2.2	2.2	2.2	3.4	2.4	2.4	2.2
	Recp 20	6.4	5.2	2.2	2.2	2.5	5.4	2.5	2.5	2.5
	Spaulding Turnpike Exit 3 Southbound Ramps at Woodbury Avenue Extension									
	Recp 21	**1.9**	1.8	2.2	**2.2**	1.9	**1.8**	2.3	**2.3**	1.9
Northeast Quadrant	Recp 22	1.9	1.8	2.2	2.2	1.8	1.8	2.3	2.3	1.9
	Recp 23	1.8	**1.8**	2.2	2.2	1.8	1.8	2.3	2.3	1.8
	Recp 24	1.9	1.8	2.0	2.0	1.8	1.8	2.0	2.0	1.8
	Recp 25	1.8	1.8	1.8	1.8	**2.0**	1.8	1.9	1.9	**2.0**
	Recp 26	1.8	1.7	2.1	2.1	2.2	1.7	2.2	2.2	2.2
Northwest Quadrant	Recp 27	1.8	1.8	2.5	2.5	**1.8**	1.8	2.5	2.5	**1.8**
	Recp 28	**1.8**	**1.8**	2.6	**2.6**	1.8	**1.8**	2.9	**2.9**	1.8
	Recp 29	1.8	1.8	2.3	2.3	1.8	1.8	2.4	2.4	1.8
	Recp 30	1.8	1.6	2.1	2.1	2.0	1.7	2.2	2.2	2.0
	Recp 31	1.8	1.8	2.2	2.2	1.7	1.8	2.3	2.3	1.7
South Quadrant	Recp 32	1.8	1.7	2.3	**2.3**	1.8	1.7	2.3	**2.3**	1.8
	Recp 33	1.8	1.7	2.1	2.1	1.8	1.7	2.1	2.1	1.8
	Recp 34	**1.9**	**1.8**	2.1	2.1	1.8	1.8	2.2	2.2	1.8
	Recp 35	1.9	1.8	2.1	2.1	**1.8**	**1.8**	2.2	2.2	**1.9**

	River Road Connector at Woodbury Avenue Extension									
	Recp 36	1.8	1.7	1.9	1.9	2.2	1.7	1.9	1.9	2.3
Southeast Quadrant	Recp 37	1.7	1.7	2.0	2.0	2.0	1.7	2.0	2.0	2.0
	Recp 38	1.7	1.6	2.0	2.0	**1.9**	1.6	2.1	2.1	**1.9**
	Recp 39	1.8	1.6	2.0	2.0	2.2	1.6	2.1	2.1	2.2
	Recp 40	**1.8**	**1.8**	2.1	**2.1**	1.8	**1.8**	2.2	**2.2**	1.8
	Recp 41	1.8	1.6	2.0	2.0	2.2	1.6	2.2	2.2	2.2
Northeast Quadrant	Recp 42	1.8	1.6	2.0	2.0	**1.9**	**1.7**	2.0	2.0	**2.0**
	Recp 43	**1.8**	**1.7**	2.5	**2.5**	1.8	1.7	2.3	**2.3**	1.9
	Recp 44	1.7	1.6	1.9	1.9	1.8	1.7	1.9	1.9	1.8
	Recp 45	1.7	1.6	1.8	1.8	1.8	1.6	1.8	1.8	1.8
	Recp 46	1.7	1.6	1.9	1.9	1.8	1.6	1.9	1.9	1.8
West Quadrant	Recp 47	1.8	1.6	2.1	2.1	1.8	**1.7**	2.2	2.2	1.8
	Recp 48	**1.8**	**1.6**	2.3	**2.3**	1.8	1.6	2.4	**2.4**	1.8
	Recp 49	1.7	1.6	2.2	2.2	1.8	1.6	2.3	2.3	**1.9**
	Recp 50	1.8	1.6	2.0	2.0	**1.9**	1.6	2.0	2.0	1.9
	Spaulding Turnpike Exit 3 Southbound Ramps at Woodbury Avenue Extension									
	Recp 51	1.8	1.7	1.6	1.6	2.6	1.7	1.7	1.7	2.7
Northeast Quadrant	Recp 52	1.7	1.7	1.6	1.6	2.8	1.7	1.7	1.7	2.7
	Recp 53	**1.8**	**1.7**	1.6	**1.6**	**2.9**	**1.7**	1.7	**1.7**	**2.8**
	Recp 54	1.7	1.7	1.6	1.6	2.5	1.7	1.7	1.7	2.3
	Recp 55	1.8	1.7	1.6	1.6	2.1	1.7	1.7	1.7	2.1
	Recp 56	1.7	1.7	1.8	1.8	2.2	1.7	1.8	1.8	2.5
Northwest Quadrant	Recp 57	1.8	1.6	1.9	**1.9**	2.5	1.7	1.9	**1.9**	2.5
	Recp 58	**1.8**	**1.7**	1.8	1.8	**2.7**	**1.7**	1.9	1.9	**2.7**
	Recp 59	1.7	1.6	1.7	1.7	2.1	1.7	1.8	1.8	2.2
	Recp 60	1.7	1.6	1.7	1.7	2.0	1.6	1.8	1.8	2.0
	Recp 61	1.7	1.6	1.6	1.6	2.1	1.6	1.7	1.7	2.4
Southwest Quadrant	Recp 62	1.7	1.7	1.7	1.7	2.4	1.7	1.8	1.8	**2.4**
	Recp 63	1.7	**1.7**	1.8	1.8	**2.4**	1.7	1.9	1.9	2.3
	Recp 64	1.8	1.7	1.8	1.8	2.2	**1.7**	2.0	**2.0**	2.3
	Recp 65	**1.8**	1.7	1.9	**1.9**	2.2	1.7	1.9	1.9	2.2
	Recp 66	1.8	1.7	1.7	1.7	2.2	1.7	1.7	1.7	2.2
Southeast Quadrant	Recp 67	1.8	1.7	1.6	1.6	2.2	1.7	1.7	1.7	2.1
	Recp 68	1.8	1.7	1.7	**1.7**	**2.2**	1.7	1.7	1.7	2.2
	Recp 69	**1.8**	**1.8**	1.6	1.6	2.2	**1.8**	1.7	**1.7**	**2.2**
	Recp 70	1.8	1.8	1.6	1.6	1.9	1.8	1.7	1.7	2.0

Dover

1 Hour CO Results

Highest values for specific receptors are in bold

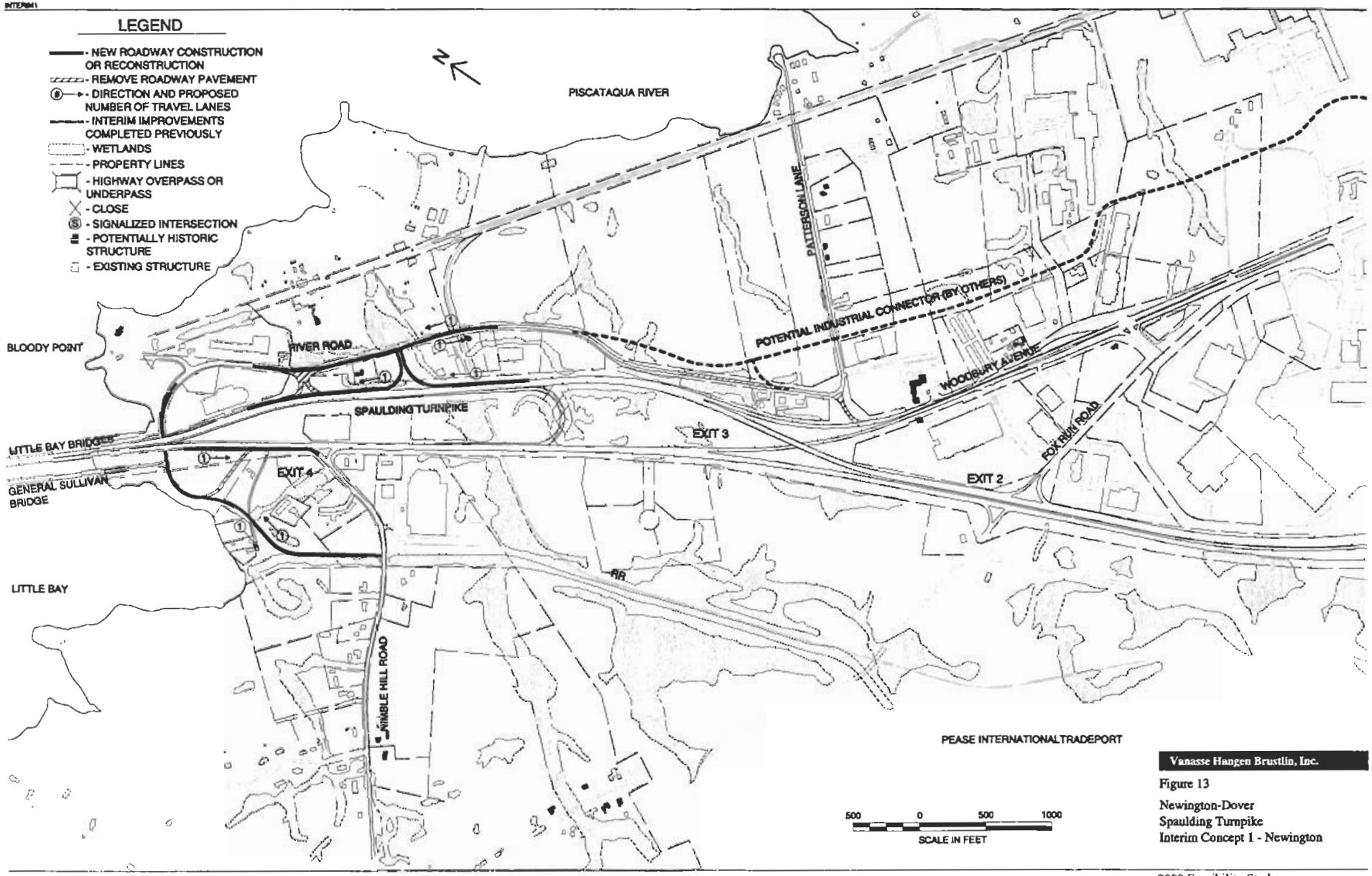
Receptor Location	Intersection/Receptors	2003 Existing	2013 No Build	2013 Alt 2 Build	2013 Allt 3 Build	2025 No Build	2025 Alt 2 Build	2025 Alt. 3 Build
	Dover Point Road at Route 4							
	Recp 1	3.0	2.8	2.8	2.8	2.8	3.0	3.0
Southeast Quadrant	Recp 2	3.3	2.9	3.0	3.0	3.0	3.4	3.4
	Recp 3	**3.8**	**3.5**	**4.1**	**4.1**	**3.5**	4.8	4.8
	Recp 4	3.8	3.4	3.6	3.6	3.5	**4.9**	**4.9**
	Recp 5	4.4	3.6	3.4	3.4	3.6	4.2	4.2
	Recp 6	3.2	2.9	3.4	3.4	2.9	3.9	3.9
North Quadrant	Recp 7	3.4	3.0	3.5	3.5	3.0	4.1	4.1
	Recp 8	3.5	3.1	3.6	3.6	3.4	4.2	4.2
	Recp 9	3.7	3.2	3.7	3.7	3.2	4.2	4.2
	Recp 10	**3.9**	**3.3**	**3.7**	**3.7**	**3.4**	**4.3**	**4.3**
	Recp 11	**3.8**	3.3	3.4	3.4	**3.4**	4.0	4.0
Southwest Quadrant	Recp 12	3.7	3.3	3.4	3.4	3.5	4.2	4.2
	Recp 13	3.7	**3.3**	**3.7**	**3.7**	3.3	**4.5**	**4.5**
	Recp 14	3.3	3.0	3.0	3.0	3.0	3.4	3.4
	Recp 15	3.1	2.9	2.8	2.8	2.9	3.1	3.1
	Spaulding Turnpike Exit 6 Northbound Off Ramp at Route 4							
	Recp 16	**4.2**	**3.6**	4.9	4.9	**3.7**	**5.2**	**5.2**
Southeast Quadrant	Recp 17	4.8	4.1	4.9	4.9	4.1	4.9	4.9
	Recp 18	3.9	3.5	**5.1**	**5.1**	3.5	5.2	5.2
	Recp 19	3.8	3.4	4.2	4.2	3.4	4.1	4.1
	Recp 20	4.5	4.0	3.8	3.8	4.0	3.8	3.8
	Recp 21	5.9	5.1	**5.5**	**5.5**	5.2	**5.3**	**5.3**
Northeast Quadrant	Recp 22	6.2	5.3	5.3	5.3	5.4	5.3	5.3
	Recp 23	6.4	5.3	4.1	4.1	5.6	4.3	4.3
	Recp 24	**4.9**	**4.2**	3.7	3.7	**4.3**	3.7	3.7
	Recp 25	4.8	4.1	3.4	3.4	4.2	3.5	3.5
	Recp 26	5.4	**4.6**	3.6	3.6	**4.8**	3.8	3.8
Northwest Quadrant	Recp 27	**5.5**	4.5	3.7	3.7	4.8	3.7	3.7
	Recp 28	6.7	5.6	4.0	4.0	5.8	4.2	4.2
	Recp 29	7.6	6.3	4.4	4.4	6.5	4.5	4.5
	Recp 30	9.8	7.9	**5.6**	**5.6**	8.3	**5.8**	**5.8**
	Recp 31	**6.8**	**5.7**	4.5	4.5	**5.8**	4.6	4.6
Southwest Quadrant	Recp 32	5.1	4.4	4.3	4.3	4.5	4.5	4.5
	Recp 33	4.5	3.9	**4.8**	**4.8**	4.0	**4.9**	**4.9**
	Recp 34	4.1	3.7	4.7	4.7	3.7	4.8	4.8
	Recp 35	5.0	4.2	4.2	4.2	4.4	4.3	4.3
	Spaulding Turnpike Exit 6 Southbound On Ramp at Route 4							
	Recp 36	3.2	3.0	2.7	2.7	3.0	2.9	2.9
Southeast Quadrant	Recp 37	3.3	3.1	2.9	2.9	3.2	3.1	3.1
	Recp 38	3.6	3.2	**3.7**	**3.7**	3.3	3.8	3.8
	Recp 39	3.6	3.3	3.5	3.5	3.3	3.7	3.7
	Recp 40	**3.7**	**3.3**	3.6	3.6	**3.4**	**3.9**	**3.9**
	Recp 41	5.3	4.5	3.6	3.6	4.7	**3.8**	**3.8**
North Quadrant	Recp 42	5	4.3	3.5	3.5	4.4	3.6	3.6
	Recp 43	**4.7**	**4.1**	**3.6**	**3.6**	**4.1**	3.6	3.6
	Recp 44	4.3	3.9	3.4	3.4	4.0	3.4	3.4
	Recp 45	4.1	3.6	3.4	3.4	3.8	3.5	3.5
	Recp 46	3.2	2.9	3	3	3.1	3.1	3.1
Southwest Quadrant	Recp 47	3.4	2.9	3.1	3.1	3.0	3.2	3.2
	Recp 48	4	3.4	3.9	3.9	3.5	4.0	4.0
	Recp 49	**3.6**	**3.2**	**3.9**	**3.9**	**3.3**	**4.1**	**4.1**
	Recp 50	3.3	3.1	3.8	3.8	3.2	3.9	3.9

8 Hour CO Results

Highest values for specific receptors are in bold

Receptor Location	Intersection/Receptors	2003 Existing	2013 No Build	2013 Alt 2 Build	2013 Allt 3 Build	2025 No Build	2025 Alt 2 Build	2025 Alt. 3 Build
	Dover Point Road at Route 4							
	Recp 1	2.1	2.0	2.0	2.0	2.0	2.1	2.1
Southeast Quadrant	Recp 2	2.3	2.0	2.1	2.1	2.1	2.4	2.4
	Recp 3	**2.7**	**2.5**	**2.9**	2.9	**2.5**	3.4	3.4
	Recp 4	2.7	2.4	2.5	2.5	2.5	**3.4**	3.4
	Recp 5	3.1	2.5	2.4	2.4	2.5	2.9	2.9
	Recp 6	2.2	2.0	2.4	2.4	2.0	2.7	2.7
North Quadrant	Recp 7	2.4	2.1	2.5	2.5	2.1	2.9	2.9
	Recp 8	2.5	2.2	2.5	2.5	2.4	2.9	2.9
	Recp 9	2.6	2.2	2.6	2.6	2.2	2.9	2.9
	Recp 10	**2.7**	**2.3**	**2.6**	2.6	**2.4**	**3.0**	3.0
	Recp 11	**2.7**	2.3	2.4	2.4	**2.4**	2.8	2.8
Southwest Quadrant	Recp 12	2.6	2.3	2.4	2.4	2.5	2.9	2.9
	Recp 13	2.6	**2.3**	**2.6**	2.6	2.3	**3.2**	3.2
	Recp 14	2.3	2.1	2.1	2.1	2.1	2.4	2.4
	Recp 15	2.2	2.0	2.0	2.0	2.0	2.2	2.2
	Spaulding Turnpike Exit 6 Northbound Off Ramp at Route 4							
	Recp 16	**2.9**	**2.5**	3.4	3.4	**2.6**	**3.6**	3.6
Southeast Quadrant	Recp 17	3.4	2.9	3.4	3.4	2.9	3.4	3.4
	Recp 18	2.7	2.5	**3.6**	3.6	2.5	3.6	3.6
	Recp 19	2.7	2.4	2.9	2.9	2.4	2.9	2.9
	Recp 20	3.2	2.8	2.7	2.7	2.8	2.7	2.7
	Recp 21	4.1	3.6	**3.9**	3.9	3.6	**3.7**	3.7
Northeast Quadrant	Recp 22	4.3	3.7	3.7	3.7	3.8	3.7	3.7
	Recp 23	4.5	3.7	2.9	2.9	3.9	3.0	3.0
	Recp 24	**3.4**	**2.9**	2.6	2.6	**3.0**	2.6	2.6
	Recp 25	3.4	2.9	2.4	2.4	2.9	2.5	2.5
	Recp 26	3.8	**3.2**	2.5	2.5	**3.4**	2.7	2.7
Northwest Quadrant	Recp 27	**3.9**	3.2	2.6	2.6	3.4	2.6	2.6
	Recp 28	4.7	3.9	2.8	2.8	4.1	2.9	2.9
	Recp 29	5.3	4.4	3.1	3.1	4.6	3.2	3.2
	Recp 30	6.9	5.5	**3.9**	3.9	5.8	**4.1**	4.1
	Recp 31	**4.8**	**4.0**	3.2	3.2	**4.1**	3.2	3.2
Southwest Quadrant	Recp 32	3.6	3.1	3.0	3.0	3.2	3.2	3.2
	Recp 33	3.2	2.7	**3.4**	3.4	2.8	**3.4**	3.4
	Recp 34	2.9	2.6	3.3	3.3	2.6	3.4	3.4
	Recp 35	3.5	2.9	2.9	2.9	3.1	3.0	3.0
	Spaulding Turnpike Exit 6 Southbound On Ramp at Route 4							
	Recp 36	2.2	2.1	1.9	1.9	2.1	2.0	2.0
Southeast Quadrant	Recp 37	2.3	2.2	2.0	2.0	2.2	2.2	2.2
	Recp 38	2.5	2.2	**2.6**	2.6	2.3	2.7	2.7
	Recp 39	2.5	2.3	2.5	2.5	2.3	2.6	2.6
	Recp 40	**2.6**	**2.3**	2.5	2.5	**2.4**	**2.7**	2.7
	Recp 41	3.7	3.2	2.5	2.5	3.3	**2.7**	2.7
North Quadrant	Recp 42	3.5	3.0	2.5	2.5	3.1	2.5	2.5
	Recp 43	**3.3**	**2.9**	**2.5**	2.5	**2.9**	2.5	2.5
	Recp 44	3.0	2.7	2.4	2.4	2.8	2.4	2.4
	Recp 45	2.9	2.5	2.4	2.4	2.7	2.5	2.5
	Recp 46	2.2	2.0	2.1	2.1	2.2	2.2	2.2
Southwest Quadrant	Recp 47	2.4	2.0	2.2	2.2	2.1	2.2	2.2
	Recp 48	2.8	2.4	2.7	2.7	2.5	2.8	2.8
	Recp 49	**2.5**	**2.2**	**2.7**	2.7	**2.3**	**2.9**	2.9
	Recp 50	2.3	2.2	2.7	2.7	2.2	2.7	2.7

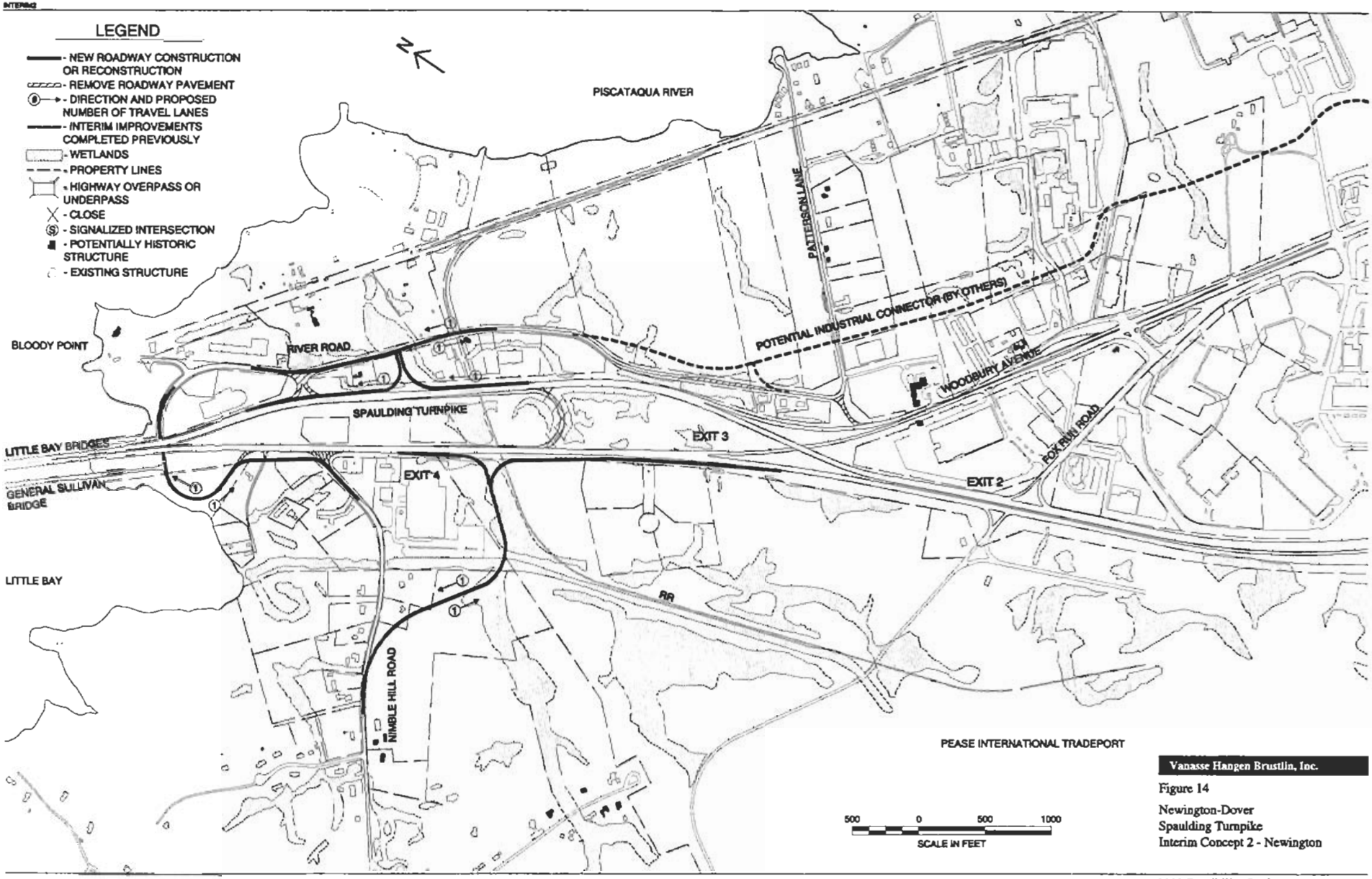
Appendix I – Feasibility Study Alternatives, February 2000



Vanasse Hangen Brustlin, Inc.

Figure 13

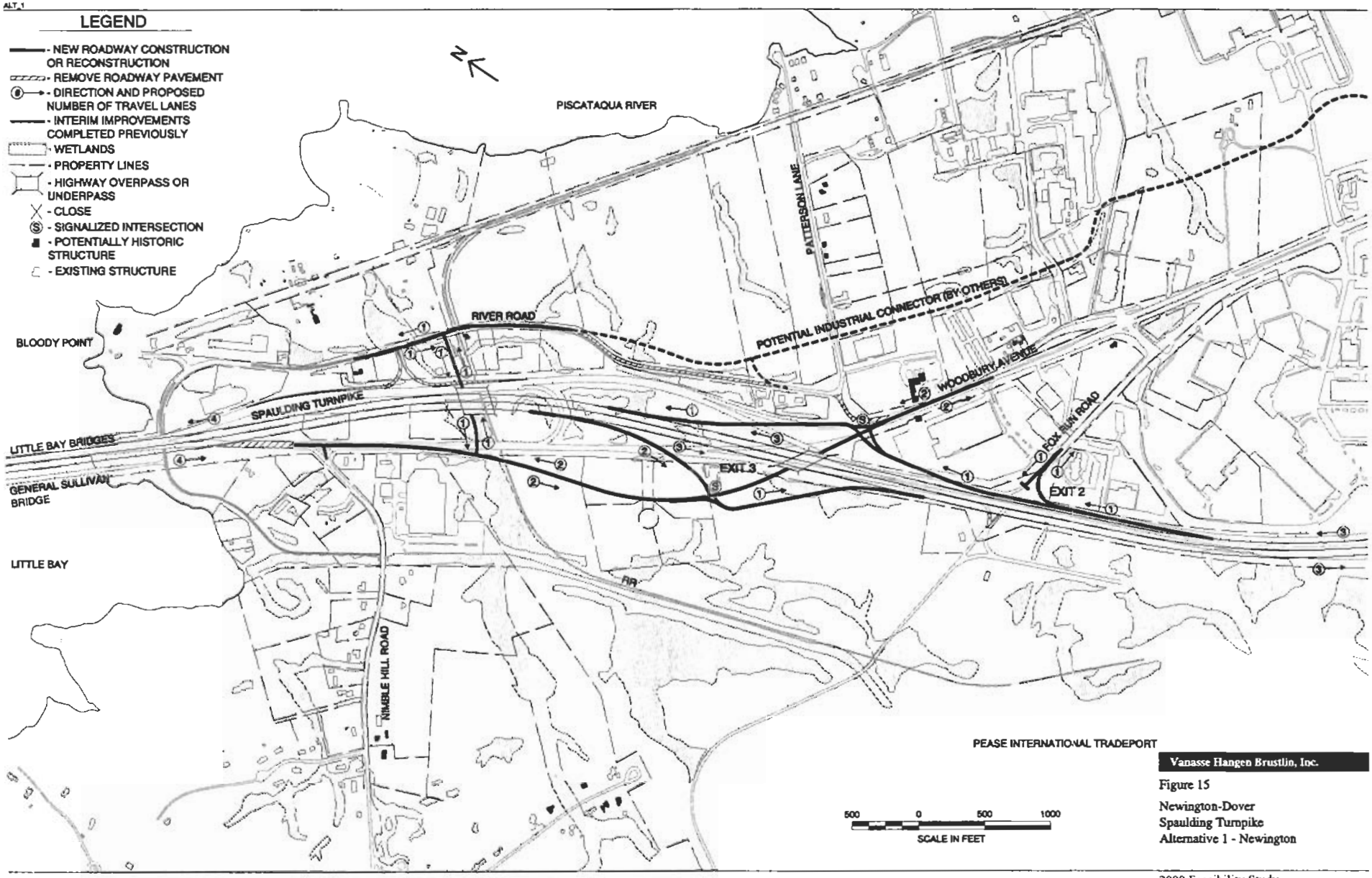
Newington-Dover
Spaulding Turnpike
Interim Concept 1 - Newington



Vanasse Hangen Brustlin, Inc.

Figure 14

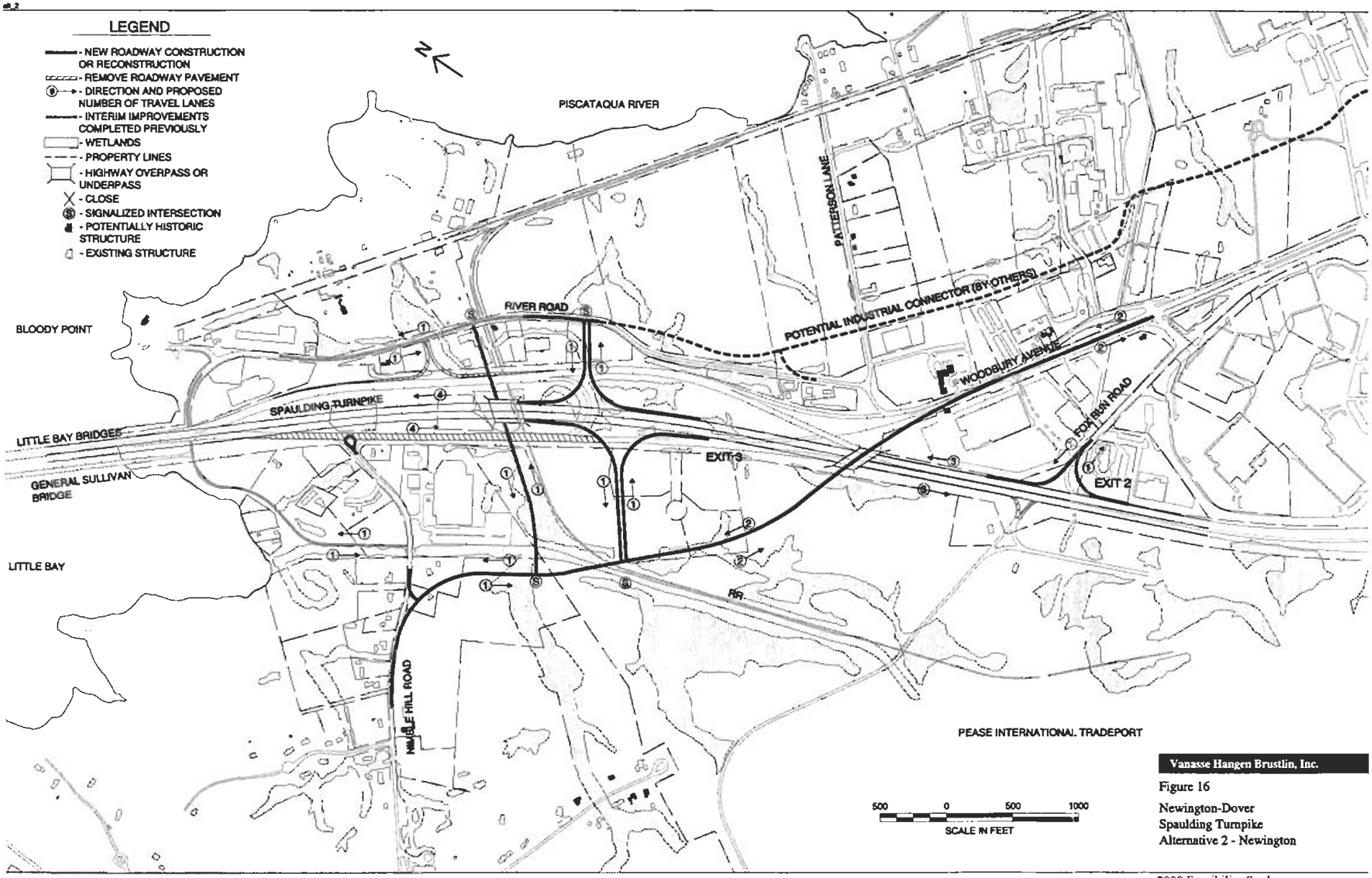
Newington-Dover
Spaulding Turnpike
Interim Concept 2 - Newington



Vanasse Hangen Brustlin, Inc.

Figure 15

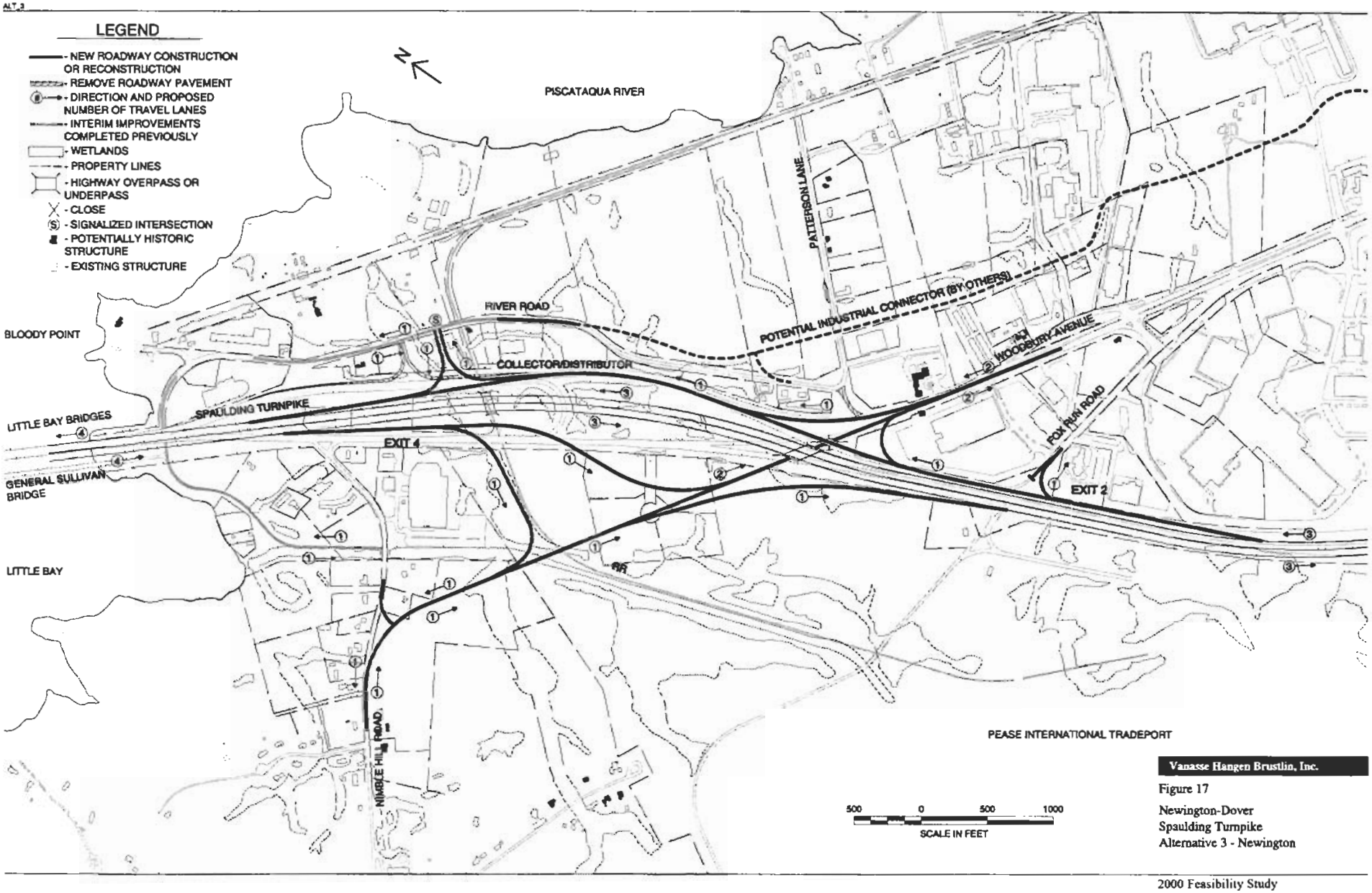
Newington-Dover
Spaulding Turnpike
Alternative 1 - Newington



Vanasse Hangen Brustlin, Inc.

Figure 16

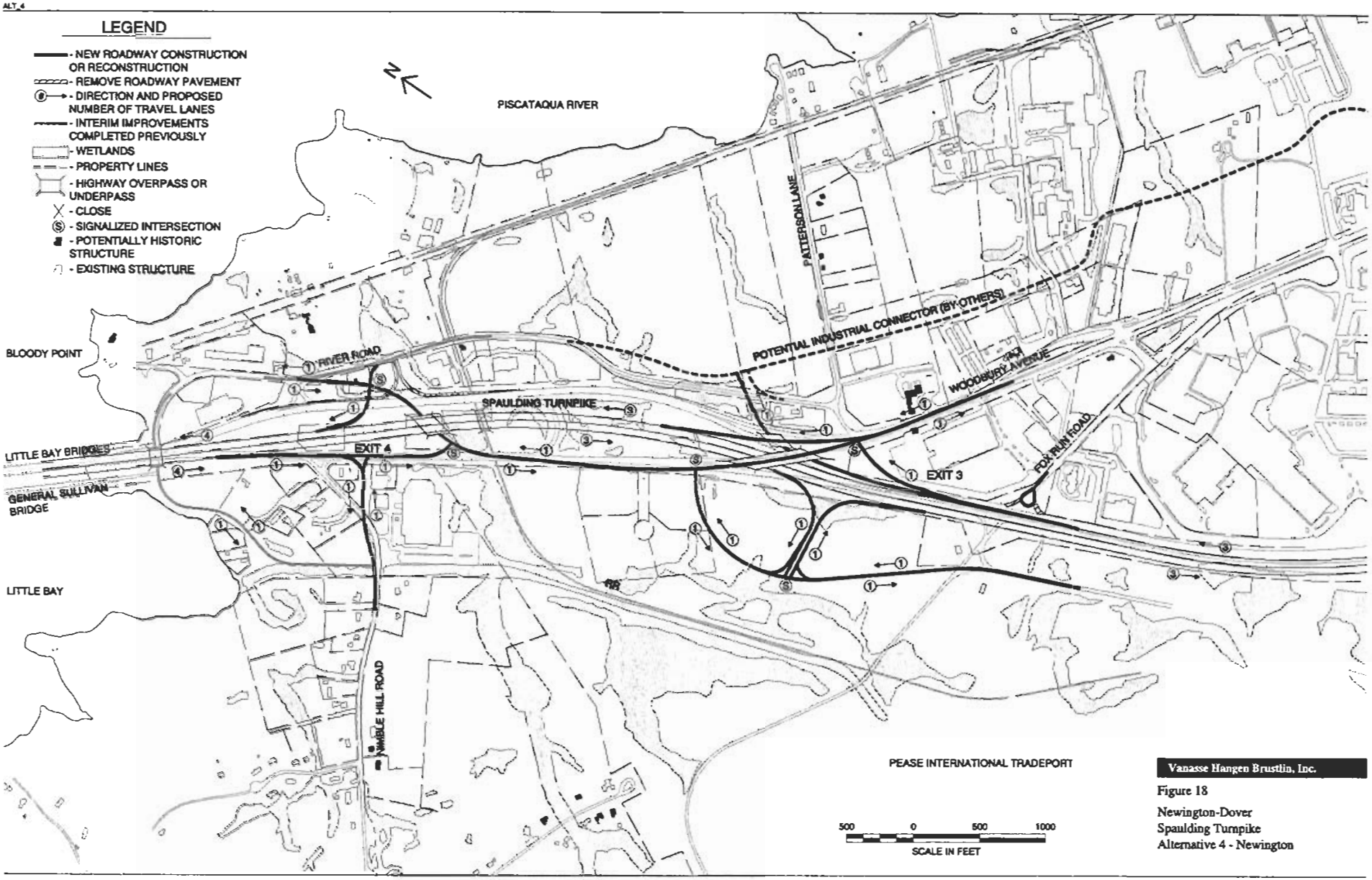
Newington-Dover
Spaulding Turnpike
Alternative 2 - Newington



Vanasse Hangen Brustlin, Inc.

Figure 17

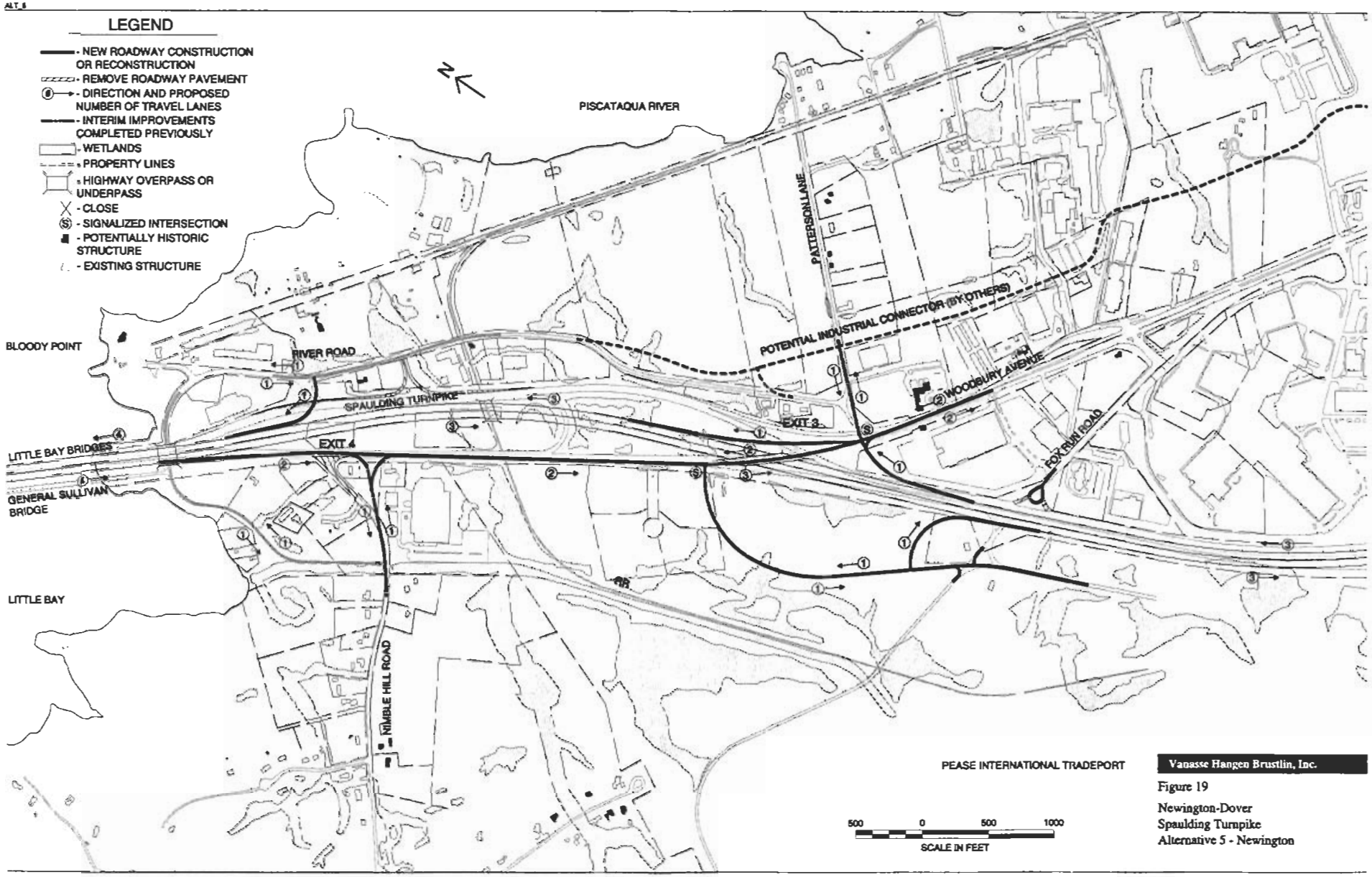
Newington-Dover
Spaulding Turnpike
Alternative 3 - Newington



Vanasse Hangen Brustlin, Inc.

Figure 18

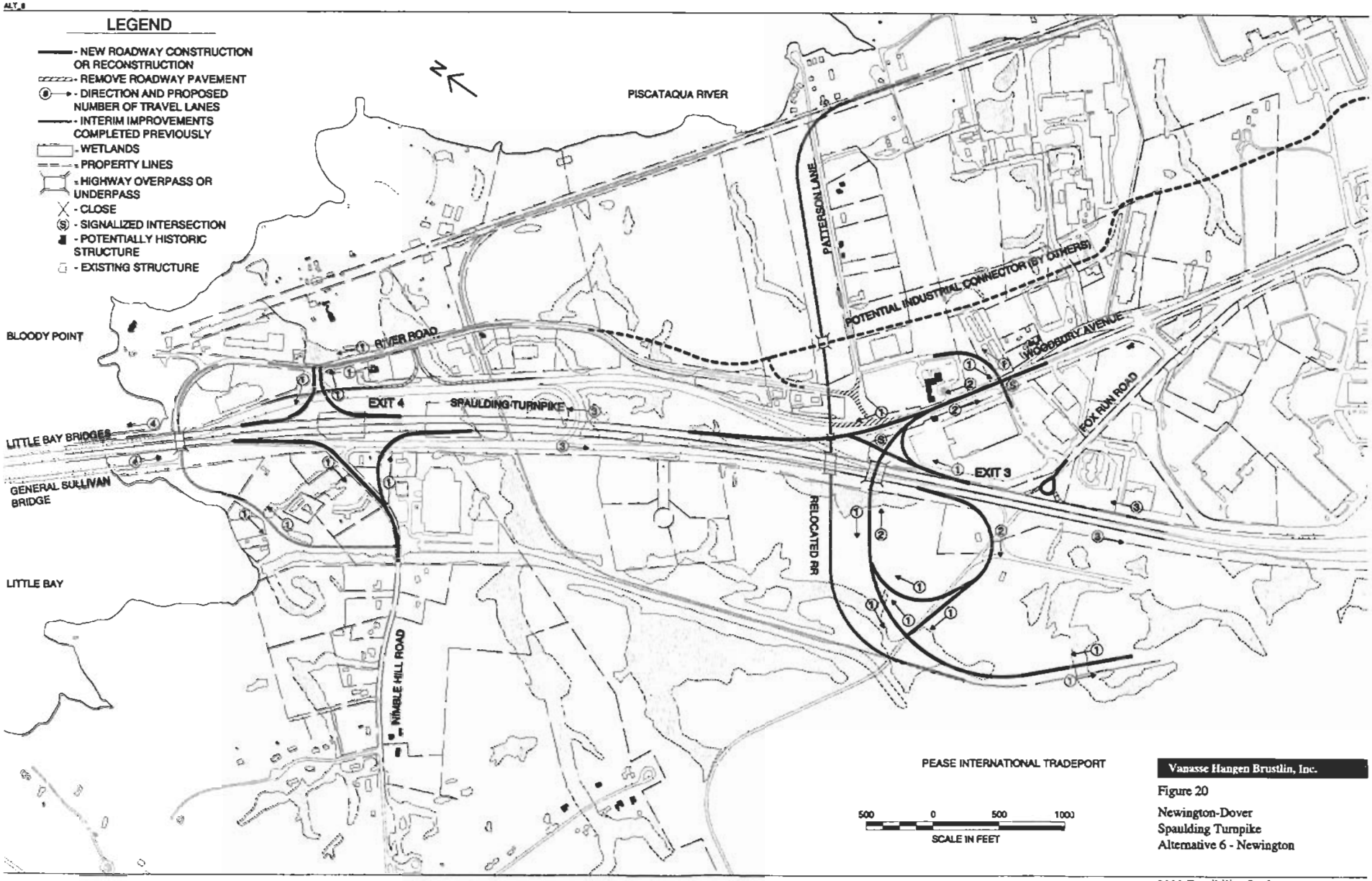
Newington-Dover
Spaulding Turnpike
Alternative 4 - Newington



Vanasse Hangen Brustlin, Inc.

Figure 19

Newington-Dover
Spaulding Turnpike
Alternative 5 - Newington



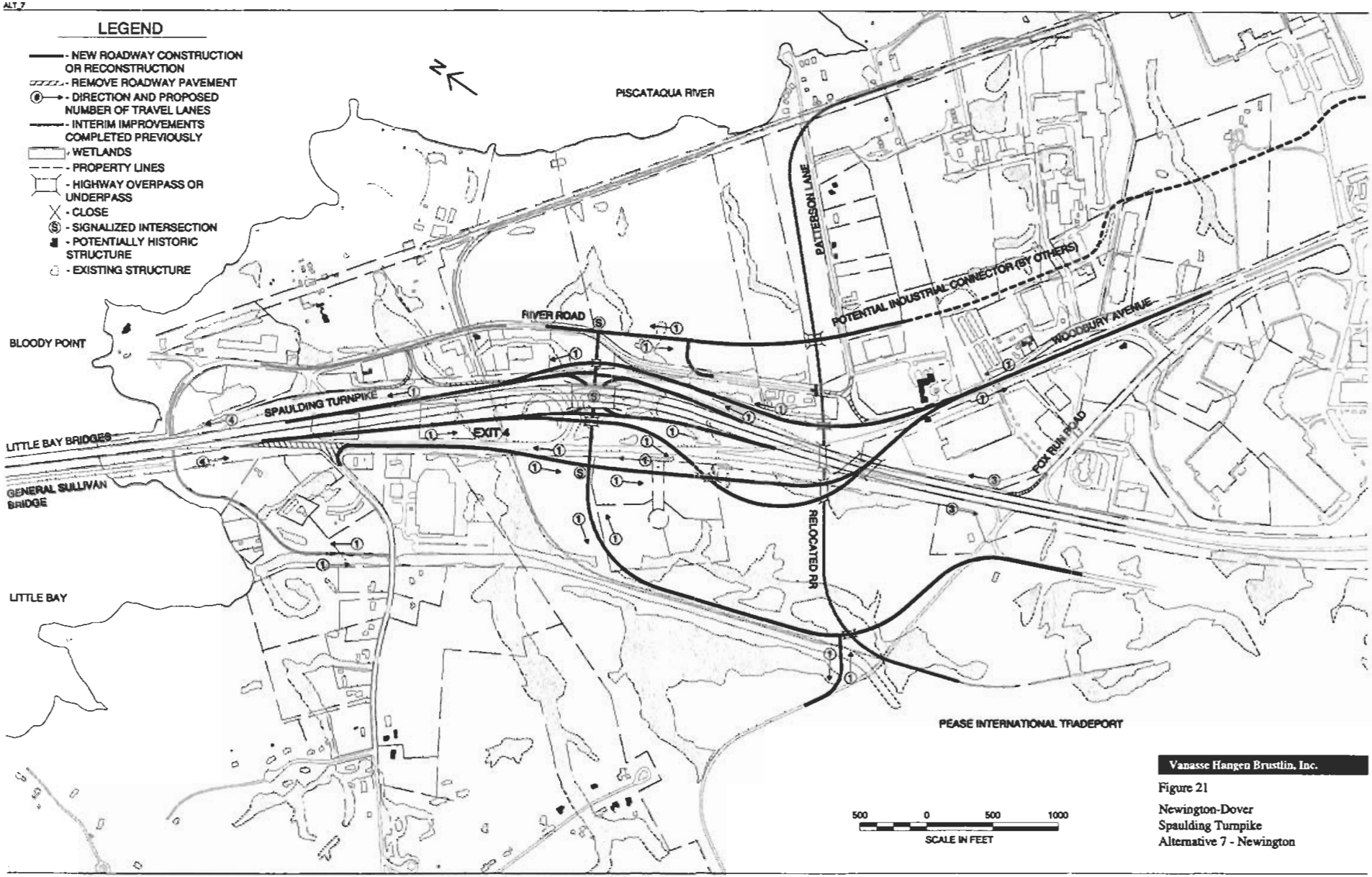
Vanasse Hangen Brustlin, Inc.

Figure 20

Newington-Dover
Spaulding Turnpike
Alternative 6 - Newington

2000 Feasibility Study

ALT_7



Vanasse Hangen Brustlin, Inc.

Figure 21

Newington-Dover
Spaulding Turnpike
Alternative 7 - Newington

2000 Feasibility Study

Appendix J – Environmental Justice Evaluation

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
INTER-OFFICE COMMUNICATION

DATE: June 21, 2005

FROM: David Chandler, Chief of Labor Compliance

TO: Craig Green, Administrator, Bureau of Highway Design
William Oldenburg, Chief of Prelim. Design, Bureau of Highway Design
Kevin T. Nyhan, Senior Environmental Manager, Bureau of Environment

RE: Environmental Justice Population Analysis, Project: Newington-Dover, 11238

The attached analysis and recommendations are provided pursuant to Title VI of the Civil Rights Act of 1964 and Executive Order 12898. The intent of these statutes is to ensure fair and full participation and the equal receipt of benefits under Federally-assisted programs. Your efforts in carrying out the recommendations stated herein will minimize the potential for disproportionate impact on protected groups (EJ Populations).

The table entitled "EJ Population Analysis" is a comparison of protected groups identified within the project and surrounding areas; this analysis should be used by project personnel to determine whether or not adverse impacts (if any) have a disproportionate affect on the identified EJ populations. Where disproportionate impacts exist, project personnel should seek to avoid, mitigate, or minimize impacts. Additional information regarding specific outreach measures where appropriate has been provided.

If you have questions regarding this analysis, please contact me @ 271-2467.

encls: EJ Population Analysis

cc: C. Waszczuk

EJ Population Analysis for Project # Newington-Dover, 11238

STUDY AREA	AVG% Elderly Population	AVG % Minority Population	AVG % Low-income Population	AVG% Disabled Population
Impacted Area (US Census Tract# 812, Block Group 2; US Census Tract #685, Block Group 3	13.5%	*4.7%	*4.3%	25.3%
Surrounding Area	17.6%	2.8%	2.5%	25.0%
REMARKS: * The population percentage identified is meaningfully greater than the surrounding area and constitutes an EJ population. Characteristics of this particular study area indicate that targeted outreach efforts to solicit public participation should be taken.				

Impacted Area: The impacted area was defined by the population within Census Tract #812, Block Group 2; Census Tract #685, Block Group 3.

Surrounding Area: All Block Groups immediately adjacent to the impacted area.

EJ Population: A population of people protected under Title VI within the impacted area that is meaningfully greater than the surrounding population.

Special Considerations: It is apparent that the **minority and low income populations** within the impacted area are meaningfully greater than the surrounding areas. Additional outreach efforts should be taken to encourage public comment and participation from these groups. This project constitutes an alteration in accordance with Title II of the Americans with Disabilities Act and Section 504 of Federal requirements. As such, minimum accessibility design requirements must be met. It may be necessary and appropriate to alter the existing pedestrian right-of-way (if applicable) within the scope of the project. If you require more information regarding specific requirements or recommendations, please contact me at 271-2467.

Outreach Recommendations: One subsidized Apartment complex has been located in the vicinity of the impacted area. Notice of public information meetings should be sent to this location: Great Bay Residential Facility I, 2041 Woodbury Avenue, Newington, NH 03801-28041.

Appendix K – Wetland Impact Database Summary

APPENDIX K- WETLAND IMPACT DATABASE - PREFERRED ALTERNATIVE
July 10, 2006

Impact Area Number	Functional Evaluation Unit	Palustrine Forested (PFO) (ft2)	Palustrine Emergent (PEM) (ft^2)	Palustrine Scrub Shrub (PSS) (ft^2)	Open Water (POW) (ft^2)	Estuarine (E1/E2) (ft2)	Total Wetland Impact Area (ft^2)	Total Wetland Impact Area (acres)	Perennial Bank Impact (linear feet)	Intermittent Bank Impact (linear feet)
1			1,615				1,615	0.04		
2	N-2	6,553	997	100			7,650	0.18		
3	N-2		1,485				1,485	0.03		
4	N-2		7,261				7,261	0.17		
5	N-2		769				769	0.02		
6	N-2	53,125					53,125	1.22		
7	N-2	3,834					3,834	0.09		
8	N-2	33,300					33,300	0.76		
9	N-3a		990				990	0.02		
10	N-3b	79,873	59,846	28,664			168,383	3.87		
11	N-19c		2,121	1,499			3,620	0.08		
12	N-3c	4,148	28,498	12,374			45,020	1.03		
13	N-3c		864				864	0.02		
14	N-3c		2,734				2,734	0.06		
15	N-3c	1,507	6,219				7,726	0.18		
16	N-9b		8,397	7,767			16,164	0.37		
17	N-9b			577			577	0.01		
18	N-9b		901				901	0.02		
19	N-9b			2,102			2,102	0.05		
20	N-9b			125			125	0.00		
21	N-9b	5,788		11,779			17,567	0.40		
22	N-9b	33					33	0.00		
23	N-9b	3,342					3,342	0.08		
24	N-9b	16,813		5,691			22,504	0.52	289	
25			1,186				1,186	0.03		
26			2,622				2,622	0.06		
27	N-8a	87,450	3,718				91,168	2.09		
28	N-8a	234					234	0.01		
29	N-8a		232				232	0.01		
30			437				437	0.01		
31			2,011		562		2,573	0.06		
32			4,787				4,787	0.11		
33	E2					4,559	4,559	0.10		
P1	E1					2,207	2,207	0.05		
P2	E1					2,194	2,194	0.05		
P3	E1					2,074	2,074	0.05		
P4	E1					1,933	1,933	0.04		
P5	E1					1,933	1,933	0.04		
P6	E1					1,982	1,982	0.05		
P7	E1					2,200	2,200	0.05		
P8	E1					1,760	1,760	0.04		
34	E2					1,120	1,120	0.03		
34a	E2					322	322	0.01		
35	D-1a		1,129				1,129	0.03		
36	D-1a		15				15	0.00		
37	D-1a		1,267				1,267	0.03		
38	D-1	2,485	1,065				3,550	0.08		
39	D-1		5,689				5,689	0.13		
40	D-1	150					150	0.00		
41	D-12	7,847					7,847	0.18		
42	D-12		244				244	0.01		
43	D-12		95				95	0.00		
44	D-1		5,517				5,517	0.13		
45	D-11		5,947				5,947	0.14		
46	D-9	765					765	0.02		
47	D-10		823				823	0.02		
48	D-10	90,970	1,287				92,257	2.12		
49	D-9		6,554				6,554	0.15		
50	D-2	239					239	0.01		
51	D-2		3,455				3,455	0.08		
52	D-2	54,946					54,946	1.26		
53	D-2		5,801				5,801	0.13		
54	D-10	43,424					43,424	1.00		
55	D-10	4,675					4,675	0.11		
56	D-10		12,453				12,453	0.29		
57	D-8	8,553					8,553	0.20		
58	D-8	290					290	0.01		
59	D-6		4,204				4,204	0.10		
60			26,689				26,689	0.61		
61	D-7	3,484					3,484	0.08		
62	D-7A	275					275	0.01		
63	D-3		2,233				2,233	0.05		
64	D-4		10,576				10,576	0.24		
65		20,884					20,884	0.48		
66			2,372				2,372	0.05		
67			2,619				2,619	0.06		
68		1,760					1,760	0.04		
69		433					433	0.01		
70			1,953				1,953	0.04		
71			37				37	0.00		
72			5,215				5,215	0.12		
73			1,131				1,131	0.03		
74			6,254				6,254	0.14		
75		1,031					1,031	0.02		
76		110					110	0.00		
77		95					95	0.00		
78			492				492	0.01		
79		4,005					4,005	0.09		
80			994				994	0.02		
	TOTAL	**542,421**	**253,800**	**70,678**	**562**	**22,284**	**889,745**	**20.4**	**289**	**0**

Appendix L – Noise Barrier Evaluation

Spaulding Turnpike Improvement Project
Newington to Dover
Noise Barrier Data
Dover

NOISE BARRIER 1: Spaulding Turnpike Southbound (Station 611 on Spaulding Turnpike to Station 52 on Ramp)

Include residences along Dover Point Road: 60 residential receptor locations included in the noise analysis (Area 9).

Existing Noise Levels: Approximately 22 Residential receptor locations approach, are at, or exceed the noise abatement criteria. The existing sound levels range from 55 to 70 dBA.

2025 Build Noise Levels: Approximately 25 Residential receptor locations approach, are at, or exceed the noise abatement criteria. The 2025 Build sound levels range from 60 to 71 dBA.

Project Impacts: The proposed project will have a slight to moderate increase from existing sound levels at this location.

Preliminary Barrier Requirements: The barrier[1] will be 14 feet high and approximately 4,100 feet long. Estimated barrier cost is $1,148,000 and would provide a 5 dBA benefit or greater for 40 residential receptor locations.

Cost Criteria: Cost per 5dBA or greater benefited receptor = $28,700

A noise barrier is recommended for this location (Station 611 on Spaulding Turnpike to Station 52 on Ramp).

NOISE BARRIER 2: Spaulding Turnpike Northbound (Station 621 on Spaulding Turnpkike to Station 237 on Ramp Overpass)

Include residences along Wentworth Terrace and Cote Drive: 80 residential receptor locations included in the noise analysis (Areas 7, 8 and 11).

Existing Noise Levels: Approximately 23 Residential receptor locations approach, are at, or exceed the noise abatement criteria. The existing sound levels range from 49 to 71 dBA.

2025 Build Noise Levels: Approximately 26 Residential receptor locations approach, are at, or exceed the noise abatement criteria. The 2025 Build sound levels range from 51 to 72 dBA.

Project Impacts: The proposed project will have no noticeable change from existing sound levels at this location.

Preliminary Barrier Requirements: The barrier will be 14 feet high and approximately 4,200 feet long. Estimated barrier cost is $1,176,000 and would provide a 5 dBA benefit or greater for 63 residential receptor locations.

Cost Criteria: Cost per 5dBA or greater benefited receptor = $18,667

A noise barrier is recommended for this location (Station 621 on Spaulding Turnpike to Station 237 on Ramp Overpass).

[1] Barrier costs were estimated using a Wall cost of $20 / Sq. ft and a Berm cost of $10 / Sq. ft

NOISE BARRIER 3: Spaulding Turnpike Southbound (Station 668 on Spaulding Turnpike to Station 704 on Spaulding Turnpike)

Include residences along Clearwater Drive/Spur Road and west side of tolls (Area 13).

40 residential receptor locations included in the noise analysis.

Existing Noise Levels: Approximately 19 Residential receptor locations approach, are at, or exceed the noise abatement criteria. The existing sound levels range from 44 to 66 dBA.

2025 Build Noise Levels: Approximately 19 Residential receptor locations approach, are at, or exceed the noise abatement criteria. The 2025 Build sound levels range from 49 to 67 dBA.

Project Impacts: The proposed project will have a slight to moderate increase from existing sound levels at this location.

Preliminary Barrier Requirements: The barrier will be 12 feet high and approximately 3,600 feet long. Estimated barrier cost is $864,000 and would provide a 5 dBA benefit or greater for 29 residential receptor locations.

Cost Criteria: Cost per 5dBA or greater benefited receptor = $29,793

A noise barrier is recommended for this location (Station 668 on Spaulding Turnpike to Station 704 on Spaulding Turnpike).

NOISE BARRIER 4: Spaulding Turnpike Northbound (Station 671 on Spaulding Turnpike to Station 708 on Spaulding Turnpike)

Include residences along Homestead Lane/Pearson Drive and east side of tolls (Area 14): 50 residential receptor locations included in the noise analysis.

Existing Noise Levels: Approximately 15 residential receptor locations will approach, are at, the noise abatement criteria. The existing sound levels range from 54 to 68 dBA.

2025 Build Noise Levels: Approximately 15 Residential receptor locations approach, are at, or exceed the noise abatement criteria. The 2025 Build sound levels range from 58 to 70 dBA.

Project Impacts: The proposed project will have no noticeable change from existing sound levels at this location.

Preliminary Barrier Requirements: The barrier will be 14 feet high and approximately 3,700 feet long. Estimated barrier cost is $1,036,000 and would provide a 5 dBA benefit or greater for 35 residential receptor locations.

Cost Criteria: Cost per 5dBA or greater benefited receptor = $29,600

A noise barrier is recommended for this location (Station 671 on Spaulding Turnpike to Station 708 on Spaulding Turnpike).

VHB Vanasse Hangen Brustlin, Inc.